A bachelor’s paper concerning the inherent issues with the choice between Restrictive Control and Directive Command and how they should be applied on the Battlefields of today.
Declaration of Independent writing and Truthfulness

I hereby declare that everything in this paper is written only by me, the author (Cadet Albert Hedberg 850411, Swedish National Defence College/ Military Academy Karlberg) during the period of the 13th of March 2013 until the 27th of May 2013. When it is not me that has written the sentence or part of the text I swear that I have quoted and cited the proper author to the best of my knowledge and ability.

I have truthfully quoted and cited the correct authors and sources. If I have misquoted any part, it has not been with intent to do so and I will correct it in the next edition of this paper.

I have to the best of my ability crosschecked all the internet sources to get as close to the truth that is possible.

Location and Date

Signature
Why is 20/21st century warfare Commandable not Controllable and why do we still choose Restrictive Control instead of Directive Command

- Aspects of Frictions interfering with the officer´s solution to command and control.
# Table of Contents

DECLARATION OF INDEPENDENT WRITING AND TRUTHFULNESS ........................................2  
FOREWORD ......................................................................................................................5  
1 INTRODUCTION ...........................................................................................................5  
   1:1 INTRODUCTION ....................................................................................................5  
   1:2 BACKGROUND AND PURPOSE .........................................................................6  
   1:3 AIM AND RESEARCH QUESTION .......................................................................8  
   1:4 DISPOSITION .....................................................................................................9  
   1:5 DEMARCATIONS .................................................................................................10  
   1:6 TERMINOLOGY ..................................................................................................11  
   1:7 PREVIOUS RESEARCH .......................................................................................13  
2 METHOD .....................................................................................................................15  
   2:1 SYSTEMATIZING .................................................................................................15  
   2:2 THEORETICAL BACKGROUND ..........................................................................15  
   2:3 SCIENTIFIC INTERPRETATION .........................................................................16  
   2:4 DEFINITION OF ASPECTS ................................................................................16  
      - 2:4:1 Culture ......................................................................................................16  
      - 2:4:2 C4 integration and influence ....................................................................17  
      - 2:4:3 Outside interference ................................................................................18  
   2:5 VALIDATION AND RELIABILITY ........................................................................18  
   2:6 SUMMARY .........................................................................................................19  
3 ANALYSIS ...................................................................................................................19  
   3:1 DIRECTIVE COMMAND ....................................................................................20  
   3:2 RESTRICTIVE CONTROL ....................................................................................22  
   3:3 CULTURE ............................................................................................................23  
   3:4 C4ISR INTEGRATION AND INFLUENCE ..............................................................25  
   3:5 OUTSIDE INTERFERENCE ....................................................................................28  
4 SUMMARY AND DISCUSSION ....................................................................................30  
   4:1 DISCUSSION CONCERNING CULTURE ...............................................................30
During the whole essay I will use the male form of positions and so forth and refrain from writing i.e. him/her, not because of gender stereotyping but because of making it grammatically succinct and easy for the reader. It is the view of the author that the profession of officer and military is not bound to one certain gender, creed, race or sexual orientation.

If I do not write a specific page in the source citation, then I am referring to an idea, historical occurrence or view that is visible throughout the whole source.

1 Introduction

1:1 Introduction
“The command of an army and its subordinate units requires leaders capable of judgment, with clear vision and foresight, and the ability to make independent and decisive decisions and carry them out unwaveringly and positively. Such leaders must be impervious to the changes in the fortunes of war and possess full awareness of the high degree of responsibility placed on their shoulders.”
The quotation above comes from one of the most popular books concerning command that has been written since the early 20th century (Shamir, 2011, p. 50). The quote highlights some of the key issues when it comes to commanding, such as the independent leader, the changes in war and responsibility. Everything combined underlines the problem with command in both historical and modern wars all over the world. Since the time of the standing army started to appear on the battlefield and the opportunity to have a physical overview of all the troops under your command evaporated, command and control and how one uses it, has exploded in importance for the countries involved (Van Creveld, 1985, pp. 9-11).

One can view war as either a chaotic state that you can control or something so chaotic that you can only go along in the maelstrom and try to command as good as possible (Samuels, 2003, p. 3). For many countries they have tried to accomplish total control over everything that are involved in war, control over the soldiers and officers (Muth, 2011, pp. 175-176,195,206), control over the information arena, control over the frictions that appear, they have even tried to control the enemy with varying results (Muth, 2011, pp. 209-210) (Van Creveld, 1985, pp. 240,247,252) (Shamir, 2011, pp. 134,140). Other countries have chosen the other option that is brought forth in this paper, namely the option of command. Instead of restricting how their officers and soldiers are to operate and solve their mission, they have instead issued directives and task/missions and left it to their subordinates to explore the battlefield and find the solutions that win the day for their army.

But not everything is cut in black or white, there is no single solution or explanation to the problems with command as will be shown in the main body of this paper.

1:2Background and purpose
The book Art of War by von Clausewitz was written by the German officer during the 1810s to 1830s, as part of his work at the German general staff and its school. It did not get a lot recognition or significance until Graf von Moltke got appointed as chief of staff for
Cadet Albert Hedberg Swedish Military Academy Karlberg and Helmut Schmidt Universität 2013

The German Heer\(^1\) (army) by the Kaiser and commanded it under its campaigns against Austria 1866 and France 1870-1871 (Graf von Moltke, 1993, pp. 1-19). The rapid success by the German Heer stunned the world of that era, the rapid advances and the different envelopments that it succeeded with were a mystery to many (Graf von Moltke, 1993, pp. 242-244) (Van Creveld, 1985, pp. 129-131). The (for many) unknown (Graf von Moltke, 1993, p. vii) generals brilliant command skills chocked the historians and scholars that tried to find the answer to why the German Heer had succeeded so fast against on the paper stronger opponents (Gudmundsson, 1995) (Samuels, 2003\(^2\)). The studies of the Prussian and later on the German general staff increased, some countries even tried to imitate it (Muth, 2011, p. ch.2). Under the first world war the warring countries that were in a deadlock at the different fronts tried everything to get the upper hand on each other, e.g. digging large mines under the enemies trenches or using different kinds of irritating and poisonous gas (Gudmundsson, 1995, pp. 36-39). The British side tried excessive control to get the upper hand on the Germans (Samuels, 2003, pp. 94-95). They used the notion that if you thought about everything and wrote an order that covered all aspects, then you would succeed, everything could be foreseen and controlled (Dixon, 1994, pp. 80-85). The Germans on the other hand thought about war as a state of utter chaos that you could not control, you could just try and command your units by directive command (Samuels, 2003, p. 3) (Army, 1912, p. 7)\(^3\).

The usage of command and control was kept up by the different warring parties in the wars that followed with unrelated determination. A lot of countries claimed to adopt directive command but still remained loyal to control rather than genuine directive command (Shamir, 2011) (Van Creveld, 1985)\(^4\). After the Vietnam War and in the early days of the 1980’s the idea and thoughts of using genuine directive command had a renaissance within the westernized world (Shamir, 2011, pp. 101-105) (Van Creveld, 1985, p. ch.8). The so called usage of directive command exploded with nations such as the United states of

---

\(^1\) The composition and naming of the German Army during the late 1800s and early 1900s are far from easy and will only attribute to misinterpretation, thus they will only be mentioned as German Heer (army), some deviations will occur but, will be explained when they occur.

\(^2\) I do not refer to a certain page because the theme is reoccurring in the whole books.

\(^3\) Directive command is also a version of Auftragstaktik or mission command. It is the term used by Samuels.

\(^4\) Reoccurring in the books.
America and the United Kingdom taking the lead but other countries soon followed suit but not everything went well (Shamir, 2011, pp. 195-197).

The problems were soon casting its long shadows of the horizon, it did not work out as the cloistered generals in their countries foresaw how it would end up. They still had problems with commanding and controlling their subordinates, the enemy appeared at locations they should not appear in even though the C2/C4ISR equipment said so. The battles were not won any more easily than before and the officers in charge did not have the control over the situation as it unfolded. (Van Creveld, 1985, p. ch.7) (Shamir, 2011, pp. 185-187)

And so the situation keeps it appearance even though we now have a lot of equipment that we did not have before to give us information and to keep track of it all (Van Creveld, 1985, pp. 1-2). The questions that arises are did they really integrate genuine directive command or did they just put restrictive control into another set of clothing and if so why did they do it? So the question comes forth what did cause all the failures, was it the command or the control and what were the king pin in the failure. Why did the different armies keep the Restrictive Control?

In the coming paper I will try to answer it under the general questions “Why is 20-21\textsuperscript{st} century warfare command able not controllable and why do we still choose Restrictive Control before Directive Command”.

\textbf{1:3 Aim and research question}

After a long discussion with representatives from the Swedish National Defence College\textsuperscript{5}, the Swedish Command School\textsuperscript{6} and representatives from Universität der Bundeswehr Hamburg about the recurring issue of the basic problem of command and control within warfare in the 20-21\textsuperscript{st} century I have finalized my main two questions as following:

- Why is 20-21\textsuperscript{st} century warfare Commandable not Controllable?
- Why do we still choose Restrictive Command instead of Directive command?

\textsuperscript{5} http://www.fhs.se/en/about-the-sndc/  
Sub-questions that have arisen under the basic research phase are:

- What is directive command?
- What is restrictive control?
- How does culture affect command and control
- How does outside interference affect command and control
- How Does C4ISR integration affect command and control

The aim of this paper is to bring a little bit of clarity into the questions “is war Commandable or Controllable” and why do we still use Restrictive Control. It will not concern great generals of the history or just the technical aspect of command and control. The aim is to bring clarity concerning how one (read officer/commander) should go about the job when they are in the field leading their units.

1:4 Disposition

Chapter one will deal with the background and the basic demarcations and terminology. Chapter one will lay the basic foundation for the rest of the paper through presentation of the research questions.

Chapter Two concerns the methodology and the more scientific aspect of the paper. It will explain some of the basic aspects that influence the choice of command or control.

Chapter three contains the analysis of the meaning of Directive Command, Restrictive Control and the three aspects I have put forth.

Chapter Four consists of the discussion about how the three aspects influence the choice of Restrictive command and Directive command and some of the benefits with Directive Command.

The last part of the paper deals with potential further research and lessons learned.
1:5 Demarcations

In this paper I will only focus on land operations within the army of different countries, I will not mention or try to analyse or discuss air- and sea operations or their part in land operations.

The command level that will be analysed is the lower levels within the army, i.e. battalion down to squad\(^7\). Covering all the levels within the army would be an impossible because of the sheer size and volume of those units\(^8\). The issue of how you should use command or control will be the same, why will be presented later in the main body of the paper.

I will only discuss how countries and their armies act and how the use command and control accordingly. I will not review how irregular forces or other organisations i.e. terror organisations use command and control. I will also refrain from discussing the eastern hemisphere and how they have used command and control due to a lack of scientific material and to keep the paper as applicable as possible\(^9\). I will also mainly focus on four countries, Israel, Germany, Great Britain and the United States of America. This does not mean that I will not mention or use other countries but this are the four I will focus on. My choice comes from both practical and theoretical aspects. The practical aspect is that it is easy to find a multitude of different sources concerning command and control and also C4ISR. The more theoretical aspect are that the Auftragstaktik /mission command comes from Germany and has been evolved by the Israeli army and adapted in different versions by the British and American army. The British and American army has before their

\(^7\) Other levels of the military hierarchy will be used in some of the examples such as brigade and fire and manoeuvre team

\(^8\) The discussion concerning if leadership and the specific need for command and control is the same for all levels within the armies of the world has the potential for another paper but it will not be discussed or addressed in this paper

\(^9\) e.g. A German Infantry division during the late 1930’s contained 17,263 soldiers and 4,465 horses (Beck, et al., 2009)

\(^10\) By the eastern hemisphere the author means countries such as Russia, former countries in the Warsaw pact, china and Middle Eastern states. The author humbly admits that there is a need for further studies into the eastern hemispheres usage of command and control.
adaption utilized more restrictive Control as their main version of how to Command (Shamir, 2011).

Due to the fact that the both of the words command and control have several implications within the English language and especially within the military community, I am forced to severely restrict and define those words. I will define them according to their specific meaning in this paper later on under the heading “Analysis” (Longman, 2010, pp. 329,368-369).

I will not go into any depth concerning the different versions of management and practical or theoretical leadership, I will only concern Directive Command, Restrictive Control and mention Umpiring.

1:6 Terminology

Within the command and control area there are a couple of words that have significantly more meaning and stature then others.

Warfare: “The activity of fighting in a war – used especially when talking about particular methods of fighting e.g. mountain warfare, guerrilla warfare and chemical warfare”. (Longman, 2010, p. 1972)

In this paper warfare will cover the following types of war:

- **Regular warfare:** a conflict between two or more, warring sovereign nations that mainly upholds the Geneva Convention

- **Irregular warfare:** “A violent struggle among state and non-state actors for legitimacy and influence over the relevant populations. IW (irregular warfare) favours indirect and asymmetric approaches, though it may employ the full range of military and other capabilities, in order to erode an adversary's power, influence, and will.”

---

11 This description is the one that the author was thought under his studies at The Swedish Military Academy 2010-2013. The author has not found another one that differs from the one brought forth by the author.

12 Authors remark.

Peacekeeping operations: operations carried out with the general consent of disputing parties in order to achieve a long-term peace settlement (Krigsman, 2009, p. 321).

- Peace enforcement operations: operations to restore or maintain peace between fighting who do not consent to intervention (Krigsman, 2009, p. 321).

Auftragstaktik/ Mission command: This word is the word that most of the paper revolves around, not always directly but indirectly. The core issue of the word is decentralization and trust (Beck, et al., 2009, pp. 3-4). When trying to find one clear meaning of the word I find it’s overwhelming and it is a word of different tones. To simplify the issue I will use the definition found in US DOD publication JP 3-31 Command and control for Joint Land Operations. The definitions is as follows

- “The conduct of military operations through decentralized execution based upon mission-type orders.”\(^{14}\) Another more detailed definition of mission command can be found in US DOD publication ADP 6-0 from 2012:

**Mission Command Philosophy**

Exercise of authority and direction by the commander using mission orders to enable disciplined initiative within the commander’s intent to empower agile and adaptive leaders in the conduct of unified land operations.

Guided by the principles of...

- Build cohesive teams through mutual trust
- Create shared understanding
- Provide a clear commander’s intent
- Exercise disciplined initiative
- Use mission orders
- Accept prudent risk

The principles of mission command assist commanders and staff in balancing the art of command with the science of control.

\(^{14}\) [http://www.dtic.mil/doctrine/dod_dictionary/?zoom_query=mission+command&zoom_sort=0&zoom_per_page=10&zoom_and=1](http://www.dtic.mil/doctrine/dod_dictionary/?zoom_query=mission+command&zoom_sort=0&zoom_per_page=10&zoom_and=1) viewed on the 31st of March 2013
The definition above is fairly clear but it is tarnished by American command culture (Shamir, 2011, pp. 57-67). When mission command is viewed from other cultures, the focus on the intent is greater than being a disciplined follower of the commander (Shamir, 2011, pp. 82-94) (Beck, et al., 2009, pp. 17-18).

The translation of Auftragstaktik into Mission command are somewhat controversial but because of the fact that it is most frequently translated into mission command it will be the one I use in this paper (Van Creveld, 1985, p. 270) (Shamir, 2011, p. 3). Other variants of the translations of Auftragstaktik is Task command, mission tasking and so forth (Muth, 2011, p. 173) (Beck, et al., 2009, pp. 3-4).

C2: Command and Control: The basic command and control set. Low level often tasked more into tactical problems. (Ebbutt, et al., 2012, pp. 7-8.15)

C3: Command, Control and Communications: A more advanced version of C2 with more technology (Ebbutt, et al., 2012, pp. 7-8.15).

C4ISR: Is an abbreviation of: Command, Control, Communications, Computer and Intelligence, Surveillance and Reconnaissance. It refers to the technical and human solutions that armies use to exert the act of command (Ebbutt, et al., 2012, pp. 7-8.15). Other Known versions are: C2PC, C3I, C4I, C4IFTW, C4ISTAR (Ebbutt, et al., 2012, p. 15).

1:7 Previous research

When I researched the subject of command and control, I got multiple hits of different books, paper, magazines, essays and websites. A lot of the finds concerned the pure technical aspect of command and control, others were about famous generals such as Alexander the Great or Patton. The main portion of the finds concern the more practical aspects of command and control but often with control as a part of the bigger/broader meaning of command. There are previous works concerning the specific topic of command versus control. A lot of them can only be viewed as different interpretations of command issues and why some great general won a battle in ancient Greece or during the Second

World War. There are some sources that bring forth the cultural aspect of command and control such as Command Culture by Jörg Muth (Muth, 2011). There are a couple of standards works that makes out the main core within the subject that most authors base or refer their works to.

“On war” by von Clausewitz is the most basic one. You could almost write that without him there would not by any discussion or thoughts about command and control\(^{16}\). His work is often deemed as the standard that every young officer or history buff has to read\(^{17}\). The two main topics he brings forth\(^{18}\), are the triangle of Population, Politics and the military, and how they work together or against each other (Von Clausewitz, 1982, p. ch.1)\(^ {19}\). The other topic concerns the issue of frictions and fog of war (Von Clausewitz, 1982, p. ch.7)\(^ {20}\). Those two are often because of their close proximity to each other only mentioned as friction of war (Shamir, 2011, pp. 10-14). These two topics have a great influence on different command and control publications. Mostly because it is recognized that the triangle and the notion of frictions exists and are parts of wars. They are of factors that have great power over how the officers use command or control (Van Creveld, 1985) (Van Creveld, 2008) (Samuels, 2003) (Watts, 1996).

Books by Graf von Moltke. The books by the late Graf von Moltke are good sources of proven thoughts about how one should use directive command and not control ones subordinates or put restrictions upon oneself, e.g. the thought that no plan survives the first contact with the enemy (Graf von Moltke, 1993). His famous quote about the plan only survives the first contact with the enemy is often miss thought to be a quote by Clausewitz\(^ {21}\). His thought of not being a slave to technology or giving to hard restrictions too your subordinates, still ring true to this day (Marshall, 2000, p. 102). He’s thought are

\(^{16}\) The authors makes the statement with the full knowledge that it exists other authors that have written about command but no one is so frequently quoted and talked about in modern day academies and books. And if you go by date von Clausewitz is also one of the first to write a book about the subject. Almost all the books that I have used mention von Clausewitz in their books or as a source.

\(^{17}\) When talking with officers at Military Academy Karlberg before I left, they told me that I would need to include “On War”.

\(^{18}\) That applies to this paper.

\(^{19}\) From Von Clausewitz sub-book “On the nature of War”. Found in “On War”.

\(^{20}\) Ibid

\(^{21}\) Reoccurring event at MHS K and the National Defense College (SWE)
vividly apparent in works concerning command and control philosophy within the German army during the first and Second World War (Muth, 2011) (Van Creveld, 1985) (Van Creveld, 1982) (Samuels, 2003) (Army, 1912)

The most modern of the works that can be called standard is Command in War by the Israeli Martin Van Creveld. This book is a standard piece that modern day authors and scholars refer to in their books and papers. The book concerns the different problems with command and control and how you might solve the problems or handle them. He also brings forth problems with both command and control and what the consequences have been. The book also deals with the technology issue that influences the modern armies.

2 Method

2:1 Systematzing

To get the fullest of the text and to get more to the bottom of the source, I have used a qualitative method which focuses on getting the most out of the texts instead of using a quantitative method. I have taken my basic research question and tried to found statements that either support or reject my thesis. If I had used a quantitative method my assessment is that I would only have ended up with a lot of mass that were tainted because of authors or personal opinion, this does not mean that the books used are flawless (Hsieh & Shannon, 2005).

2:2 Theoretical background

The problem with finding a suitable theoretical background for this paper arose fairly early in the process. The field of war studies does not have any separate methods or theoretical views but are often forced into another field e.g. history or politics. The scholars often refer to that war studies is often dependent on something else, when you study war it is influenced by e.g. the historical setting or the political influence and should thus be subjugated to those scholarly methods. Other suggestions of scholarly methods that could have been applicable are: conceptual history, history of ideas, leadership/pedagogy and so on. With this in mind the viewpoints and the resulting findings in this paper could be changed accordingly to how you apply different methods on the particular topic. The one

---

22 To the knowledge of the author.
that according to me\(^{23}\), apply the best for this paper is conceptual history. A large part of the discussion concerning the application is the semantics concerning command and control. (Wegner, 2000, pp. 108-115)

2:3 Scientific interpretation

There is one large and fairly consistent issue with the research concerning command and control that has be taken into account when viewing and discussing command and control. That issue is that when reading all the books one can notice a difference between how they interpret the words. One authors view can be that command and control is something that belongs to mission command and it is more the technical aspect of leading men. Another author can separate them more and view them as different ways of exercising command over a unit or how you manage your unit. This issue has to be understood and dealt with but cannot be excluded because of the nature of the topic is concerned with.

2:4 Definition of aspects

During the previous pages of the paper that were under the main headings of introduction and method, I have demarcated it down to three aspect that can influence command and control according to me but this does not exclude other factors from interfering. I have only put in the restrictions to make this paper more demarcated.

- 2:4:1 Culture

“Culture: in a group-

The attitudes and beliefs about something that are shared by a particular group of people or in a particular organization.

“Culture: in a society-

The beliefs, way of life, art, and customs that are shared and accepted by people in particular society”.

- (Longman, 2010, p. 411)

\(^{23}\) After a lengthy discussion with Dr Martin Jonas and Professor Bernd Wegner at the Helmut Schmidt university, Hamburg in late April 2013.
The culture of the society and especially the sub-society that exists within the armed forces of the world, the aspect of culture has an enormously strong power over how things changes (if they even do) and how things are done (Muth, 2011). For example, the usage of machineguns or the integration of tanks can be severely hampered or even ruined by officers not willing to change or see the advantages that are before them (Lorber, 2007, pp. 51-63) (Dixon, 1994, pp. 116-117). With that in mind it would be utter folly, thinking that the “how to” command or control were not affected by culture (Marshall, 2000) (Muth, 2011) (Dixon, 1994). The aspect of culture also involves the adherence and the lack of adherence to doctrines (Muth, 2011).

2:4:2 C4 integration and influence

The integration of C4ISR systems and its predecessors has not gone as smoothly as the higher ranking officers give the appearance of. There have been instances where the officers have not relied on what they are told by the systems and also the opposite where they believed too strongly in it (Muth, 2011, pp. 206-209) (Van Creveld, 1985, pp. 252-254) (Shamir, 2011, pp. 64-65). To the field of C4ISR falls everything from the simple field telephone with its cumbersome lines dragging behind the soldier, to the most advanced PDA based systems that is constantly linked to satellites, UAV’s and command centrals (Ebbutt, et al., 2012). The influence of the C4ISR solutions has increased exponentially the years since the Second World War and onwards and especially since the beginning of the GWOT start in 2001 e.g. (Van Creveld, 1985) compared with (Deer Richardson, 2011). It has been an aiding hand since its introduction in the middle of the 19th century, but it has also been a burden at the same time for the people under it, it is a system that both gives to and takes from the users, it can either aid the officers in using Directive Command or Restrictive Control. (Graf von Molike, 1993, pp. 75,77) (Marshall, 2000, p. 102) (Van Creveld, 1985, pp. 262-265)

---

24 In all the three source references the topic of cultural influence is reoccurring and is not just not on one page.

25 Personal Digital Assistant e.g. Palm Pilot or Smart phone.

26 Unmanned Aerial Vehicle e.g. Predator or Raptor

27 Global War on terrorism

28 The GWOT were launched after the attacks on America on the 11th of September 2001.
Outside interference

This aspect is the broadest one of the three aspects. This aspect leaves a lot of room for the unforeseen and for the small thing that cannot be categorised e.g. view of the humans that make up the soldiers guild and other resources except C4ISR resources e.g. how many vehicles you have at the moment and so forth. This aspect also covers the influence of the politicians and rulers of the different countries that make up the warring partners. This aspect handles a lot of the interference mentioned in “On war” by von Clausewitz concerning the relationship between politicians, civilians and the military (Von Clausewitz, 1982). This aspect is also the one that makes out the “Dark matter” in the choosing of command or control.

Validation and reliability

The validation and reliability of this paper is depending on a multitude of factors.

The validation of this paper relies upon the multitude of sources that I have used writing it. The sources stems from a lot of different cultures and different era’s, they are not bound to one culture of command systems or social culture. My questions in this paper adhere to each other but are still separated by some aspects. Through my usage of a wide array of books I have done the best to get the most complete answer that has been possible under the conditions applied to a bachelor thesis.

The reliability of this paper is dependent on the sources, which in turn are also dependent on other sources which can always be misinterpreted or mistranslated. The biggest factor concerning the reliability of this question are the problems with translations of different books and transcripts that have been made by the books authors, e.g. the book of Truppenführung are translated into English by Americans, which in turn do not have proper translations on certain German words.

29 http://science.nasa.gov/astrophysics/focus-areas/what-is-dark-energy/

30 Another issue is that a lot of words are German origin and the author of the paper does not have German as mother tongue which can influence some of the understanding of the German words and their meaning. The author has done the best of his ability to find a correct translation and meaning as possible of the different words.
2.6 Summary
The theoretical framework of this paper is the different books that I have subjugated to a qualitative method. The problem has been that war studies is a fairly new field of science within the academic community as an separate subject, which has the problem that it to the authors knowledge don't have any separate method special for the field. Three different aspects have been put upon the questions to get a better comprehension of the questions and validation.

3 Analysis
“Thus by rough approximation: 60 percent of the art of command is the ability to anticipate; 40 percent of the art of command is the ability to improvise, to reject the preconceived idea that has been tested and proved wrong in the crucible of operations, and to rule by action instead of acting by rules.”


The words of command and control instil different feelings, emotions and meanings in the soldiers and officers that hear them. The first thing that has to be decided is if command and control is a function or if it is something you are conducting. This paper deals with the notion of command and control as something that you are conducting on a daily basis, in the barracks and on the battlefields not as the function or the technical solutions (yet it will
be a part later on but only as a subordinate part.). You either give a command- or control order but within both you will exercise the physical act of control e.g. when the officer checks that all the soldiers have returned back into the Forward Operating Base or that the company that is ordered to attack and seize an airfield really does it instead of taking a defensive posture.

Before the analysis concerning the three different aspects and how they affect the issue of exercising command or control, I will explain and analyse the different meanings and consequences of Directive Command and Restrictive Control.

3.1 Directive Command

“A mind that adheres rigidly and unalterably to original plans will never succeed in war, for success goes only to the flexible mind which can conform at the proper moment to a changing situation”

-General von Freytag-Loringhoven. (Samuels, 2003, p. 5)

Directive command stems from the notion that war is a state of chaos that includes frictions and humans that we as officers cannot control (Samuels, 2003, pp. 3-5) (Von Clausewitz, 1982, pp. 164-165) We cannot always foresee what the weather will be during the preamble of the attack on a certain piece of land even if we have more and more advanced weather forecast equipment on the battlefield or supporting the battlefield (Beck, et al., 2009, p. 22) (Von Clausewitz, 1982, pp. 164-167). We cannot control all the soldiers every minute of the day even if we try with the aid of more advanced usage of PDA’s and other C4ISR solutions that will be integrated into the soldier’s basic equipment (Deer Richardson, 2011, pp. 24-31) (Katz, 2012, p. 47) (Muth, 2011, pp. 206-209). The opponent will always do what they want in the way that we cannot control, e.g. if they are to attack the left village instead of the right, they will bring more armoured vehicles to the battle than we thought (Beck, et al., 2009, p. 23).

Because of all these so called frictions and problems that can arise during and under the planning of the forthcoming battle, the armies of the 20th and 21st century had to come up with a command system that were able to cope with the problems (Van Creveld, 1985, p. ch.8) (Shamir, 2011, pp. 25-27) (Samuels, 2003, pp. 5,64,131) A system that is flexible but not brittle, with enough control but without becoming rigid, and a system that encourages
Cadet Albert Hedberg Swedish Military Academy Karlberg and Helmut Schmidt Universität 2013

the action of the man in the arena. The Germans are often accredited with being the first who used this command system on a systematic level, not just being used by a lonely officer (Muth, 2011) (Van Creveld, 1985) (Samuels, 2003). During the 19th century they put it into a systematic education system that included the German General staff and different Military academies, helped by the thoughts of von Clausewitz, and Graf von Moltke (Samuels, 2003, pp. 10-12) (Muth, 2011, pp. 85-114) (Gudmundsson, 1995, pp. 18,47,50). Graf Helmuth K. B. von Moltke were one of the first advocates for a more decentralized way of commanding one’s army, advocating that the higher officers should use directive commands that leave the option of how to solve the mission to the officer in charge of the unit tasked with solving it (Graf von Moltke, 1993, pp. 46,77,79,133) (Leistenschneider, 2002, pp. 3-4, 8). He also wrote about the problems and issues that come with being too dependent of C4ISR solutions (Graf von Moltke, 1993, pp. 75,77).

According to M Samuels in his book Command or Control, directive command is described as:

“Directive Command is a command system in which decision making is decentralised. Commanders at every level are assigned general tasks, allocated resources and the allowed to complete their tasks by means of their own initiative, within the context of the whole. Key characteristics are flexibility, independence and initiative.” (Samuels, 2003, p. 5).

This definition and the benefits ascribed to it can also be found in other books such as Transforming Command by E Shamir and Command in War by M Van Creveld. This definition differs from the term mission command (that was explained earlier in this paper) by the emphasis it puts on independence and initiative of the subordinate not the

31 Referring to the speech by Theodore Roosevelt, concerning who should taking the decisions. [Link](http://www.theodore-roosevelt.com/trsorbonnespeech.html) viewed on the 16th of April 2013.

32 Reoccurring theme in all the books.

33 Sometimes also known as Moltke the older because his nephew Helmuth Johann also served as Chief of staff in the German army

34 By C4ISR solutions, I mean the communication solutions of that period, mainly telegraph or dispatch riders. (Graf von Moltke, 1993)

35 See reference list in the end of the paper for further information.
Cadet Albert Hedberg Swedish Military Academy Karlberg and Helmut Schmidt Universität 2013

discipline. In the forthcoming analysis I will be using the definition provided by M Samuels as the basis when discussing and analysing the problems and aspects of command and control.

3:2 Restrictive Control

“Finally it must be remembered that all criticism by subordinates of their superiors, and of the orders received from superior authority, will in the end recoil on the heads of the critics and undermine their authority with those below them.”


War and warfare can be viewed as something uncontrollable as stated in the heading above (3:1 Directive command) with all the side effects that comes with it. It can also be viewed as something more controllable, something that you can foresee and something that you can plan ahead for (Samuels, 2003, pp. 94-95) (Van Creveld, 1985, p. 239) (Van Creveld, 1982, pp. 32-33). If the commanding officer and he’s staff gets enough information, brings forth as many contingency plans as possible and control everything that can be controlled then victory in battle is assured (Van Creveld, 1985, p. 239) (Van Creveld, 1982, pp. 35-40). By everything it means literally everything that can be controlled, be the soldiers under one’s command, all the logistics needed for the battle and with the right amount of information even the weather. The officers does not have to take into account the possibility of any “Strategic Corporals” (Krulak, 1999) in the world of restrictive control in the same way as the officers using directive command. In his book “Command or Control”, M Samuels define Restrictive Control as:

“Restrictive control is based upon the centralisation of decision-making. Commanders are assigned detailed missions, which they must carry out exactly as prescribed. Key

---

36 The words fill different aspects of the paper.
37 By controlling the weather, I mean to foresee it with 100% accuracy.
characteristics are rigidity, conformity and reliance on exact orders” (Samuels, 2003, p. 5).

This kind of command is often used by armies that view war as a phenomenon that you manage with civilian style managing deriving from the civilian industry and in armies that have a lesser view of their own soldier (Samuels, 2003, p. 97) (Van Creveld, 1982, pp. 35-41) (Van Creveld, 1985, pp. 40-41) (Shamir, 2011, p. 96). Further analysis of the effect of management thinking concerning warfare and commanding will be analysed under the heading 3:3 Culture. The reoccurrence of the usage of restrictive control has a history going back to the first military leaders and has in some cases increased with the coinciding factor of more C4ISR equipment to the military units (Van Creveld, 1985, pp. 258,272) (Shamir, 2011, pp. 186,194) (Graf von Moltke, 1993).

To summarize it all, Restrictive Control is what it sounds like, a highly centralised way of exercising command over one’s own troops including a lot of restrictions and demarcations but with the benefits of having control of how things will be done and when. In the rest of the paper the definition of restrictive control will be the one written by M Samuels and stated earlier in this heading.

3:3 Culture

“It weakens at every point where they consider that there is a negative respect for their intelligence. This rule applies whether a man is engaged in digging a ditch or in working up a loading table for an invasion. What he thinks about his work will depend in large measures upon the attitude of his superiors. The fundamental cause of the breakdown of morale and discipline within the Army usually comes of this, that a commander or his subordinates transgress by treating men as if they were children or serfs instead of showing respect for their adulthood.”

-S.L.A Marshall in Men Against Fire concerning the loyalty of men. (Marshall, 2000, p. 115)

Culture is something we can create, change or destroy (Van Creveld, 2008, pp. 411-415). The military realm has their own cultural aspects that one has to take into accord when analysing the problems concerning the exercise of command or control. There are different
cultures within different armies when it comes to directive command or if they use restrictive control (Shamir, 2011, p. 96) (Muth, 2011). For example the old German Heer relied heavily on the original German version of Mission command, Auftragstaktik during the Great War and later on in the Second World War the Nazi army followed suit (though they also used Restrictive Control in longer and shorter periods a lot of it depending on which front and under who’s leadership and which hierarchal level (e.g. Corps versus company) e.g. most of 1914 (Gudmundsson, 1995, pp. 1-13)) (Gudmundsson, 1995) (Samuels, 2003) (Muth, 2011) (Van Creveld, 1982) (Beck, et al., 2009).

Other examples are how the British army used mainly Restrictive Control during the Great War combined with an aberrational version of mission command that is known as umpiring (Samuels, 2003, pp. 49-52). The British history did not include a standing army of any considerable size, made them often fall back into different versions of restrictive control (Samuels, 2003, pp. 96-98). Other phenomena’s such as internal culture between different battalions and social status were mixed into the pot making the British army, an organization which relied on restrictive control (Samuels, 2003, pp. 53-54). The British army are also an organization that shows that culture can change leaving behind the restrictive control and embraces the directive control to be a role model for other armies (Shamir, 2011, p. ch.5). They show how their culture can go from that of Sir Douglas Haig’s restrictive control during the Great War, where everything were planned for in the order, and all units should adhere to every detail in the order no matter what happened (Samuels, 2003, pp. 94-96) (Dixon, 1994, pp. 372-373). In the 21st century they are exhibiting and exercising a culture consisting of a more directive command culture, where the lower subordinates are allowed to interpret the situation they are faced with and then solve it under the bigger mission command “umbrella” (Shamir, 2011, pp. 142-144).

One of the most influential armies in the world, the U.S. Army has a long history of using restrictive control all through their organization, which in turn has influenced their officers, 39

39 "Umpiring is a term coined to illustrate that practice in which an officer abdicates his command responsibilities. In both directive command and restrictive control, the commander imposes his will upon his subordinates through the assignment of clear objectives, which he then ensures that his subordinates work to achieve. The Umpire by contrast, having indicated a general mission withdraws rather than spur on his subordinates. Whereas both directive command and restrictive control are “energy positive”, in that they force subordinates into action, umpiring is “energy neutral”.” (Samuels, 2003, p. 49)
exercising restrictive control as their regular command option (Marshall, 2000) (Shamir, 2011) (Muth, 2011). When going through books such as J Muth book “Command Culture” and M van Creveld “Command in war” it will be obvious for all to see, how they have instilled an culture of restrictive control all through their organization from the schools training the officers to the battlefield commands. The officers were and are trained in adhering to strict doctrines instead of more general guidelines to solve the mission given to them which in turn is contradictory too what is stated in their manuals40. (Muth, 2011, pp. 194-195). (Shamir, 2011, pp. 96,109-110).

The usage of restrictive control within the U.S Army has taken a different route then other countries through their culture of a more business and management influenced style when exerting command over there units (Shamir, 2011, p. 96). The culture of management started to come more and more into play during the Americans experiences in South Asia, mainly Vietnam during the middle and late 1960s (Shamir, 2011, p. 64). The influence of rear echelon personal and politicians in the US grew as the war continued into the 1970s and has in some ways continued until today’s conflicts, such as Operation Enduring Freedom and Operation Iraqi Freedom (Muth, 2011) (Shamir, 2011, pp. 101-111,132-142).

The management culture leads the higher officers into a field of micro-management supported by an advanced system of C4ISR solutions integrated at all levels, down to squad levels. The effect of the micro-management can often result in that the officer responsible for leading the mission does nothing or does not take advantage of opportunities that occur during the mission (Van Creveld, 1985, p. 255).

3:4 C4ISR Integration and influence

“This supervision may be exercised trough a delegate of highest authority at his headquarters or a telegraph wire attached to his back. In such case all independence, rapid decision, and audacious risk, without which no war can be conducted, ceases. An audacious decision can be arrived at by one man only” (Underline original text)

http://www.dtic.mil/doctrine/dod_dictionary/?zoom_query=mission+command&zoom_sort=0&zoom_per_page=10&zoom_and=1 Viewed on the 24th of May 2013
“The technical ability of the command systems in their various forms to make their influence felt at the lowest levels was unprecedented, but this very ability probably did as much to distort the process of command as to assist in its work.”

Martin Van Creveld concerning C3 integration during the American Vietnam war (Van Creveld, 1985, p. 260).

Different means of communication are not something new for the 20th and 21st century and its war fighters. Communication and the “how to” has always been a part of the problem when commanding your army. During the time before the 19th century and the introduction of the telegraph it were often solved by either runner/rider or some kind of visual system of simple nature e.g. fires on high mountains (Van Creveld, 1985, pp. 24-26) (Graf von Moltke, 1993, pp. 86-87). The more the rest of the societies communications systems evolved, so did the military communications systems, Command & Control (C2) turned into Command, Control & Communications (C3) and that turned into Command, Control, Communications & Computers (C4) and today it is called Command, Control, Communications, Computers, Intelligence, Surveillance and reconnaissance (C4ISR) (Ebbutt, et al., 2012, p. 15). The C4ISR systems are integrated all through our military systems, one can find them one everything from brigade command posts, main battle tanks and even down to the regular soldier on the line (Deer Richardson, 2011, pp. 24-31) (Ripley, 2011, p. 32) (Ebbutt, et al., 2012).

The command post has big systems with computers and communications equipment that are able to keep track on their own forces and what they are doing and also use the intelligence provided by e.g. Unmanned Aerial Vehicles (UAV), concerning the enemy to give different suggestions on possible means of action for the commander. These systems are available on all the different command levels within a brigade all the way down to company and in some instances even down to command vehicle in a platoon. The soldier (sometimes alone, sometimes within a squad) has different C4ISR equipment attached to his load bearing vest, different radio systems, sniper detector and PDA’s showing his and his units location sometimes even the position of the enemy. The systems attached to the soldier can communicate with the other systems that exist within the brigade so that the

The systems can easily help the commander on the ground and in the different headquarters to keep track on their units and send order in real time. Their choices increases and they can use more information to do conscious choices for the next step of action. But the flexibility and all the equipment can either be used as a positive influence on the battlefield and create situations where mission command can flourish or it can be a part of restrictive control. The C4ISR equipment can be used to micromanage the platoon leader that is “the man in the arena” and who is the one that leads the troops on the actual battlefield (Muth, 2011, p. 210). There exists reoccurring situations were higher officer’s break into a lower officer’s order and micromanage so the actions fit better into their way of thinking (Muth, 2011, p. ch.6) (Van Crevelk, 1985, p. ch.7). More views on the problems will be presented in chapter 4 in this paper.

Some countries has been leading the way in C4ISR integration, one of them are the US Army that has invested heavily since the 1960/1970s in new and modern equipment (Van Crevelk, 1985, p. ch.7) (Mahnken, 2008, pp. 1-2). With the integration of the C4ISR equipment’s comes the more and more visible dependency upon that very equipment that were supposed to help them (Muth, 2011, p. ch.6) (Mahnken, 2008, pp. 225-226). The responsible commander’s drags out on making the decision and they are becoming more and more personal within the headquarters units than before (Shamir, 2011, p. 145). The commanders are also starting to blindly trust what the equipment tells them, in some instances more than what the officer on the ground tells them (Van Crevelk, 1985, p. ch.7) (Muth, 2011, p. ch.6). The integration problem and especially the dependency and micromanagement that comes with it is not something new for us in the 21st century, the only difference are that the C4ISR equipment are now more ingrained within the military organisation (Graf von Moltke, 1993) (Samuels, 2003) (Ripley, 2011) (Mahnken, 2008, p. 2).
Outside interference

“When You Go Home, Tell Them Of Us And Say, For Their Tomorrow, We Gave Our Today”

The epitaph written on the British 2nd division’s memorial for those who fell during the Battle of Kohima. Accredited to John Maxwell Edmonds 1875-1958

The outside has always had an impact on how war has been thought, everything from king’s wishes to what the civilian population are thinking and also the Media’s reporting on the fighting (Van Creveld, 2008, pp. 369-371). The influence from the outside of how much control that has been applied onto the commander on the ground has increased with the introduction of the C4ISR equipment and also with the civilian counterparts (Mahnken, 2008, pp. 220-226) The control from the outside does influence the choices that the commander do, but especially what they are allowed to do (Van Creveld, 2008, pp. 364-371). Harder and harder rules are imposed on the commander and their soldier when they are in the warzones. According to some the outside is trying to impose micromanagement and outside values and views that are not suitable for the commander that searches for a solution on the tactical or operational problem that he faces in the real world. (Shamir, 2011) (Van Creveld, 2008) (Van Creveld, 1985) (Marshall, 2000).

The problem with the outside interference has taken the form of the “Strategic Corporal” (Krulak, 1999). In short, the strategic corporal symbolizes the effects a single soldier, one that are in the bottom of the hierarchy, can have on the strategic levels. As an example, Corporal X goes one a patrol with his squad and they are attacked by the enemy. To solve the situation and withdraw from the contact42, the corporal calls in indirect fire on the building the enemy were shooting from and destroys the building. The fire mission creates a lot of collateral damage including to civilians. Yesteryear that would have been classified as things that happens in war and that would not have affected the war for Corporal X side. But today with all the information, the news travels all over the world and upsets people and politicians, that would demand changes on how the army fights their war and what they are allowed to do (Van Creveld, 2006, p. 217). The outside would most certainly

42 In this case Contacts mean = physical contact with the enemy with ensuing gunfight.
impose restrictions and that in case will make the senior officers more inclined to use Restrictive Control on their subordinates. For more examples on the effects from the strategic corporal and its consequences one can type in “Colonel Klein”, “apache Iraq civilian” or “us bomb Afghanistan” into any larger internet search engine e.g. google.com. What show up are different episodes and examples of the strategic corporal and its effects on the military. What was once an accepted problem with war has now become unacceptable and has massive consequences on the Rules of Engagements and how to solve a tactical issue, this applies on every level from soldier to general. The consequences of what is imposed can be dire and have unknown problems following in its wake (Krulak, 1999) (Van Creveld, 2008, p. ch.18) (Van Creveld, 2006).

The outside interference from the politicians upon the tactical level has also increased during the late 20th century and the 21st century with the aid of different C4IRS equipment (Van Creveld, 1985, pp. 237,240) (Shamir, 2011, pp. 177-179). This occurrence can be viewed as a natural step with the integration of the new equipment that enable the politicians to have a good situational perspective, it is the politicians wishes that the army is supposed to solve in a way that fits the overall goal for the campaign, to quote Clausewitz:

“War is a mere continuation of policy by other means”

- (Von Clausewitz, 1982, p. 119)

According to that quote, war and politics go hand in hand but there are also other opinions concerning in which extent that the politicians should be allowed to interfere with the missions that the officers are tasked with. Another view of the interference and how far it should be allowed comes from one of Clausewitz contemporaries, Graf von Moltke who wrote “Policy must not be allowed to interfere in operations” (Graf von Moltke, 1993, p. 36). The questions of “if” and “how much” will be discussed in the next chapter.

43 The author of this paper do not justify or condemn what the episodes shows but just uses them as examples for illustrating the issue around the Strategic Corporal.
4 Summary and discussion

In the preceding chapter I have put forth three different aspects on what can cause the problem of why we (the armies of the world) does not apply Directive Command as our choice when it comes to command and control system applied by the army and why warfare is command able not controllable. Let us go forward in the discussion by addressing one aspect at a time.

4:1 Discussion concerning culture

“If in order to succeed in an enterprise, I were obliged to choose between 50 dear commanded by a lion or 50 lions commanded by a deer, I should consider myself more certain of success with the first group than with the second”

-Saint Vincent De Paul (Muth, 2011, p. 181)

“While much of the training was inevitably designed to promote physical fitness, there was nevertheless a strongly held belief that an officer, whether fit or not, should always have so much in the way of pride (or “guts”) that he would never admit to physical inadequacy until he dropped dead or unconscious.”

N. Dixon concerning officer’s culture at Sandhurst. (Dixon, 1994, p. 225)

Culture is one of the fundamental cornerstones in every society and groups that exist in the world, and we all know that the culture can affect our acts but how does it affect the acts of a military commander when he’s choosing between Directive Command and Restrictive Control? (Van Creveld, 2008) I view it as a fundamental cornerstone when it comes to the choice of Directive Command or Restrictive Control and why warfare is commandable. But does the culture start somewhere in the military academy or do they ingrain it into their organisations at a later state? Can they choose to follow the set culture or is it possible for a single officer or a whole department to differentiate from the set path? Will the culture allow the officer or the department to do the “un-controlled” move or will there by repercussions? After reading J Muth book and N Dixon book, my view is that the culture of either Restrictive Control or Directive Command is set early on in a officers career through socialization and the institutions culture that the officer belong to (Dixon, 1994) (Muth, 2011). The socialization starts at the military academy that the officer attends at the
initial part of his career. The often very young and impregnable cadet is in a world decided by others, where his future career lies in the hand of his superiors and peers (Muth, 2011). He can either get the backing for using directive command as the way he writes and gives orders during the tactic lessons or he can be reprimanded officially or unofficially (Muth, 2011). There are known cases from the military academy West Point and the General Staff School at Fort Leavenworth were cadets and young officers that are trying to use or advocate for Directive Command gets officially and unofficially reprimanded for their work (Muth, 2011, pp. 129-132). But those schools and organisations are not isolated cases that states that the early culture is forcefully ingrained into the cadet and young officer. There are also examples from the British General Staff were young officers trying to reformate are getting punished for their actions by getting held back in their careers or just getting slandered (Samuels, 2003, pp. 46-48). The whole second chapter in M Samuels book is one long good example of what can happen (Samuels, 2003). But is the picture so dark or are there other examples that are brighter and show us that it is possible for a school to make the cadet choose Directive Command?

The one really good example that I have found when searching through different books, magazines and journals are the old German General staff and the different Kadettschulen (cadet schools) that existed mainly between the early 1800s until the time around the middle of the Second World War (Muth, 2011) (Samuels, 2003) (Gudmundsson, 1995). The German General Staff and the German Heer (Army) launched different infantry regulations in the late 19th century concerning the “how to” concerning different infantry topics such as formations and how to command and how to use. In the 1906yrs and 1908yrs editions it was possible to see how the ideas of directive command were being integrated into the daily life of the ordinary soldier (Gudmundsson, 1995, p. 17) (Army, 1912, p. 7). This does not say that it where integrated smoothly or that is was not contested by different sections of the German Army or parts of the German General Staff. Some of the officer involved in the planning and execution of the plans concerning the early stages of the Great War, were against a usage of directive command and the more open formations, that were reliant on Non-Commissioned officers and the soldiers (Samuels, 2003, pp. 31-32) (Gudmundsson, 1995, pp. 22-24,33-34). Through the action of using the NCO's, the higher officer’s lost parts of the control they were having on the troops.

---

44 Non-Commissioned officer
Cadet Albert Hedberg Swedish Military Academy Karlberg and Helmut Schmidt Universität 2013

(Gudmundsson, 1995, pp. 22-23). This action went against the basic idea of Restrictive Control. The idea of Directive Command had taken a firm grip of the Army through the 1906yrs and 1908yrs infantry regulations and where starting to be adhered to more and more on the battlefield of both the Great War and later on in the Second World War but there were still cases of more restrictive control being used by the officers e.g. the early part of 1914 and parts of other battles (Gudmundsson, 1995, pp. 1-13) (Samuels, 2003, pp. 31-32). (Gudmundsson, 1995) (Samuels, 2003) (Van Creveld, 1985) (Beck, et al., 2009) (Army, 1912). The German army were on the forefront when it came to seeing a changing society coming into view, they have been joined in later years by the Israelis that also choose to see that the control culture inside the society were going in a different direction than before (Van Creveld, 2008, p. 365) (Samuels, 2003, p. 105) (Shamir, 2011, pp. 23-25).

One could challenge all this and say that an officer’s career is quite long and hopefully spans over a couple of decades so does the start of that career matter or does the later stages of the career also influence the officer in the choosing of Directive Command or Restrictive Control? Yes we can all agree that an officer’s career often spans over a longer period but does it really deviates from the start? My view is that the opinions of using Restrictive Control before Directive Command does not deviate that much under the officers service time. If they are socialized with one of the systems they often keep it until somebody proves that Directive Command is much better and that they can gain from the usage (Muth, 2011) (Shamir, 2011, pp. 111-117). Other factors that can influence are more direct orders and that the whole organization changes direction towards Directive Command instead of Restrictive Control like the British army did during the late 1980s under the leadership of Field Marshall Sir Nigel Bagnall (Shamir, 2011, p. 111).

For an army to use the in my view superior system of Directive Command on the battlefield the armies have to change their culture from one of control, that hinders subordinate that are “the man in the arena” from solving the problems before them, accordingly to the superior’s mission intent. The Israeli wars of 1956, 1967 and Operations Cast Lead45, together with how the British solved their part of operation Desert storm46 are good examples of what you can achieve when the superiors loosen the control and use

46 The British part were known as Operation Granby. (Shamir, 2011, p. 142)
directive command (Shamir, 2011, pp. 86-89142-143, 154-156). The change has to start early in the different academies and the organization has to premier the usage of Directive Command and purge the organization of the culture of Restrictive Control (Marshall, 2000, pp. 114-116) (Muth, 2011). The guidelines has to be clear all through the officer’s career, and the organization (that consists of the officers) has to review the psychology that lies behind the resistance from different departments and officers within their own organization (Dixon, 1994, pp. 189-195) (Marshall, 2000, p. 115).

The other side of this coin, (that is stated above) is the issue of losing control. We have a culture of believing in that an officer has responsibility for everything that goes on under his command or in his sector of the battle (Van Creveld, 2008, pp. 364-371) (Shamir, 2011, pp. 17-19). If a officers want to perform an attack on part of a city, he is often forced to ask for permission even if it lies in the line with the overall commanders mission intent (Muth, 2011, pp. 206-210). These kinds of extra control actions that derives from the higher officers can have catastrophic consequences on an attack or other military ventures (Dixon, 1994, p. 103). The control issue and its consequences on an officers career can give us a understanding on what motivates the officers to keep going with a system that does not solve missions in the most efficient way but does not necessarily mean the end of the officers career if something goes bad (Dixon, 1994, p. ch.6). The problem with the upkeep of this culture is that it is contradictory to getting the most of ones subordinates that is expecting to be treated as grown men and will fight back if they are not treated correctly (Dixon, 1994) (Van Creveld, 2008) (Samuels, 2003) (Marshall, 2000). That is also why warfare is becoming more and more Commandable not Controllable. In my view the two words that sums it all up is fear and angst, fear of losing one’s job and the angst of doing something that can be judge as wrong, hence not be trusted or trust, that is what the culture instil in the young officers, a culture that prevents the usage of Directive Command.

4:2 Discussion concerning C4 integration and interference

"In a future conflict, that means an Army corps commander in his field headquarters will have instant access to a live, three-dimensional image of the entire battlefield.... He will also have instant access to information about the U.S. military force and its movements, enabling him to direct nearly instantaneous air strikes, artillery fire, and infantry assaults, thwarting any attempt by the enemy to launch its own attack."
The above quotation is a good starting point when it comes to what kind of influences the C4ISR integration has upon the usage of Directive command or Restrictive Control and why the officers so readily falls into the trap of exercising Restrictive Control upon their units. The simple answer is because they can, the C4ISR systems give the superior officers the chance to exercise the same kind of control that the emperors and generals in the early centuries could exercise (Van Creveld, 1985, pp. 17-18) (Van Creveld, 2006, pp. 246-247). Systems that were once too cumbersome to deploy at the very frontline of the battlefields can now be placed on every soldier so the commanding officer can follow single soldiers if he so wishes (Mahnken, 2008, p. 222). Simple answers in all their glory but what more can lie behind the overreliance on C4ISR equipment that makes officers more prone to adhering to Restrictive Control even when they do know about the benefits of Directive Command? My view is that the answer lies in two aspects that comes with what belongs to the modern C4ISR systems, namely the first aspect that they can exercise the act of control thanks to the C4ISR Systems and because they have an overreliance of how accurate and how much the systems can show and tell them of what is happening on the battlefield.

The first aspect (that they can) can be viewed as simplistic but in my opinion it connects to the fundamental aspect of culture within their organizations. The culture of being afraid of losing control and accountability combined with the modern C4ISR technology that gives them the means to quell their angst makes them control more (Van Creveld, 2008, pp. 353,374) (Van Creveld, 2006, p. 255). The C4ISR systems have handed back the possibility that the commanders in one way lost during the rapid expansion from small controllable armies to the massive armies that could consist of hundred thousand men (Van Creveld, 2006, pp. 246-247) (Van Creveld, 1985, p. 9). In the different ages preceding the information ages the officers where moving big unit formations, not single soldiers (Van Creveld, 1985, p. 17). Today the officers have been handed the opportunity and technology to track and control individual soldiers and vehicles if they so choose and they are choosing it (Mahnken, 2008, pp. 221-222). The choosing of Restrictive Control by using the C4IRS equipment at hand, interferes with officers that are trying to use directive
command instead of aiding them, they are doing themselves a great disservice (Muth, 2011, p. 208).

The other aspect (overreliance) is also creating a problem when it comes to exercising Directive Command and turning to Restrictive Control instead. When the officers in the rear see the different intelligence and reports and even live video-feed before them, it is easy for them to believe that they hold the whole picture in their hand (Mahnken, 2008, p. 250). The truth is that you can never get the whole picture in a battle but it is possible to believe so (Watts, 1996, pp. 91-92). In my opinion they believe too much in what they are seeing and then trying to force it upon the “man in the arena”, the officer that has to deal with it upfront (Van Creveld, 2006, p. 233) (Muth, 2011, p. 210). The integration of the C4ISR equipment can help us a lot with getting more information and also utilise it, the information can be sent all through the armies, even to other organizations and departments outside of the armies and the armies can get information from those organizations and departments (Van Creveld, 2006, p. 247). This in turn can lead to overreliance on the information that the officers are fed by the computers, they can believe that they have the better picture (Mahnken, 2008, p. 249). They could not and should not forget the simple fact, that a couple of blankets or a good sleeping mat can fool a very good Infra-red (IR) camera e.g.

The above aspects also show why 20/21st century warfare is Commandable not Controllable. The simple fact that we cannot know everything, we cannot see everything and the frictions will keep extorting its toll even in the modern world of C4ISR solutions. The inherent problems with C4ISR, force us to use the flexible and to the real world adapted system of Directive Command (Watts, 1996, pp. 69-70,91).

I will end this part of the discussion with a quotation concerning the Second World War and an anecdote from the British Army during the Troubles in North Ireland (Ulster), which highlights the problems with overreliance on C4ISR and why we have to utilise Directive Command.

---

47 See footnote 27 for more information.

48 Tests performed by the Military Technology teachers in front of the 218qrzm at Military Academy Karlberg at the fall of 2011. An IR camera belonging to a Bill 2 ATGM system did not show any heat signature from a man hidden behind a standard issue sleeping mat.
“In a war from which so much human error had been eliminated by technological advances alone, human error was still the principal factor in determining the war’s outcome.”


“At one point (Prime minister 1979-1990 authors ed.) Thatcher, visiting her forces and having been briefed, suggested the use of satellites, only to have it gently explained to her that satellites, which only pass over a given area periodically and whose cameras cannot tell a Catholic Irishman from a Protestant, are not of much use in the struggle against urban guerrillas.”

- (Van Creveld, 2006, p. 233)

4:3 Discussion concerning Outside interference

“The media, in turn, defend themselves by pointing to their duty to report the truth as they see it, as well as to the fact that their ability to influence public opinion is, in the end, limited to what the public is willing to see and hear”

“It may start among the civilian population, which may become reluctant to make the necessary sacrifices, or among the troops who refuse to throw away their lives in a bad cause.”

- Extracts concerning the Medias and populations role in the decision influencing the armed forces. (Van Creveld, 2006, pp. 224,226)

Today incidents that happen over 4600 kilometres away can be viewed on social media within 24 hours of it happening. This kind of exceptional transformation rate of information can bring the armies, either the support from the politicians and the civilian

49 Distance between Stockholm in Sweden and Kabul in Afghanistan. The number is rounded because multiple contradictory sources on the internet.

50 On the 29th of April 2013 a Boeing 747 transport aircraft crashed at the military Bagram airbase in the Islamic Republic of Afghanistan. Within 24 hours a video of how the plane crashes can be seen at liveleak.com. Warning, the following links leads to graphic material: http://www.cbsnews.com/8301-202_162-57582226/dramatic-video-appears-to-show-747-crash-in-afghanistan/ and http://www.liveleak.com/view?i=c32_1367332518 both viewed on the 10th of May 2013
population back home or it can also bring down control from the earlier mentioned groups (Van Crevel, 2006, p. ch.6). The effect from outside interference upon the choice of Restrictive Control or Directive Command is clear to see, it is clear on the modern day battlefield and it is also clear for them how study the historical battlefield (Graf von Moltke, 1993) (Van Crevel, 2006, pp. 217,224-226) (Marshall, 2000).

According to the Clausewitzian triangle earlier mentioned in the paper, the society and thus the influence on war, consists of three different camps: the civilians, the politicians and the military. All the parts depend on each other but war is, as also stated earlier, just a form of policy and thus, makes the military an extended arm of the politicians. The Politicians in their turn are dependent on the Civilians, which makes the military dependent and open to influence by the two former mentioned groups. (Von Clausewitz, 1982)

Earlier in the wars before the 20th and 21st century, the monarch or the ruling fraction could often be found at the Battlefield, either as the commanding general or at least present to make the wish heard (Van Crevel, 1985, pp. 27-36) (Graf von Moltke, 1993, pp. 78-84). The outside control from the non-military (mainly the politicians) were present and were felt at a minutes notice, good or bad it was there (Graf von Moltke, 1993). The larger the armies grew and the further away they marched, the harder it became for the outside to interfere with the armies (Van Crevel, 1985, p. ch.2). The armies found the usage of C4ISR equipment could help their own ranks with command and control but so did the politicians and civilians, and so the outside control could be felt again, but this time not from a monarch or ruler sitting at the same hill as the military command, this time from further distant (Van Crevel, 1985, p. ch.4). The politicians and civilians were sitting back home, far away from the battlefield but still exerting control on the military and thus influenced their usage of either Directive Command or Restrictive Control (Van Crevel, 1985, pp. 251-258) (Marshall, 2000, pp. 166-167). During the 20th century the handling of the command and control still took time to get from the politicians and the civilians, through the military organization down to the affected officer, but the more the C4ISR equipment evolved (both military and civilian), the easier it became for the outside control to make its present felt (Van Crevel, 2006) (Crecine & Salomone, 1989).

The problem today in my view is that politicians and civilians do the same as some officers are doing, they are trusting the picture that they get from the C4ISR and Media too much instead of going to the battlefield and finding out what is really happening. In my view it is
not up to a person X-thousand kilometres away to control how some missions are solved. That will only induce more restrictive control that will harm the soldiers and officers that are on the scene solving and living the problem of the modern day war fighting. Another problem with Restrictive Control from the superiors and Politicians, is that when they have made a decision it can already be too late to be useful or accurate, and it will create a predictable and thus dangerous pattern of behaviour from the soldiers on the ground. (Marshall, 2000, pp. 96-99) (Crecine & Salomone, 1989) (Van Creveld, 2008, pp. 364-371) (Van Creveld, 2006, p. ch.6) (Van Creveld, 1985, p. ch.7).

The solution to this issue in my view, the issue that the military are subordinate to the politicians and the civilians (as they should be in a democracy) and are a tool for them, is Directive Command, good solid training for the officers and soldiers and mutual trust from all the parties involved and the usage of Directive Command from politicians. The three ingredients in this three pronged solution, are all quite similar to each other and have one common denominator, the view that all men are capable of taking responsibility for their thoughts and actions, take responsibility for transforming the superiors and politicians intent and apply it into the tactical level on the battlefield. (Muth, 2011) (Van Creveld, 2008) (Dixon, 1994) (Von Clausewitz, 1982) (Marshall, 2000)

4:4 Summary

“These boys were in fact the first future ruling class in the British history to be subjected to a powerful and uniform moulding process at all. This in itself was of the utmost significance, dooming the variety, spontaneity and open-mindedness that had hitherto been the saving graces of the British upper classes, while the pattern on which these boys were moulded compounded the harmful consequences of uniform moulding in itself.”

-Correlli Barnett (Dixon, 1994, p. 288)

(original sources, The Collapse of British Power. (Barnett, 1972)

---

51 Trust is in one way the Yang and fear/angst is the Ying in the difference when adhering to Directive Command and Restrictive Control. If the officers does not trust the subordinates to do their job properly and follow they commanders intent, they are actually distrusting their own capability to train and lead their own subordinates on the battlefield. (Dixon, 1994) (Van Creveld, 2008) (Marshall, 2000) (Muth, 2011).
Everything in the modern world is possible to affect. It does not matter if it is an object close by such as ones coffee cup or an army on a faraway battlefield, today an officer can apply he’s wishes upon a single soldier in a foxhole, on a mountain slope in the most remote part of Afghanistan. Thus, it affects the question of, if the officer should choose Directive Command or Restrictive Control when commanding that soldier. Should the officer listen to his inner voice of culture, how shall he use his C4ISR equipment for the best and how much should the outside be allowed to apply control upon his soldier? The question concerning Directive Command and Restrictive Control is not an easy one. The words has many meanings and evokes different feelings in different parts of the Clausewitzian triangle, they are susceptible to different aspect such as the ones I have mentioned earlier, because command and control within an modern army, belonging to an democratic country, are dependent on their own nation, the educational system and the technology that the country has available. On these modern day battlefields, that are constantly changing, in a world of constantly changing minds, in a world of frictions, the choice of command system has to fall on a system that has the flexibilities to survive and win on this battlefield, that flexible but not brittle command system is Directive Command.

5 Conclusions

“There are no bad regiments, there are only bad officers.”

-Field-Marshal Lord Slim52 (Dixon, 1994, p. 304)

I started of this paper with one basic question that spawned itself into the two questions:

- Why is 20/21st Century warfare command able not controllable?
- Why do we still choose restrictive Control instead of Directive Command?

52 The officer on the cover sheet of this paper.
The answering of these questions could be short and uninformed, with the conclusion of nothing. The more demanding answers to these questions have taken longer paths, paths that are far from straight and not succinct in every step, but the paths have ended at the same location. To be able to convey a proper conclusion too these question I have to split them up before I can gather them again.

5:1 The conclusion of “Why is 20/21st century warfare Commandable not Controllable?”

“Everything is simple in War, but the simplest thing is difficult.”

-Von Clausewitz (Von Clausewitz, 1982, p. 164)

To be honest, in the beginning of writing this paper I thought I had the answer to this question. In my head the answer was clear and I did not see any dark clouds looming on the horizon when it came to if I would be able to answer this question. The answer in my head was – because modern warfare like the ones we fight today is so rapid and the soldiers so divided physically, the enemy is fast and hard to control, the answer was it is only Commandable.

To counter this kind of setting we have to have a good flexible command system to deal with it and that is Directive Command. But the more I read about the subject, the more I learned, the more views I got before me, the harder it became to find one good solid answer. The different authors put forth different aspects that were interfering with and twisting the answer. The question was not simple anymore, the question would not be contained within a bachelor thesis, and it will not be in this either.

The best answer I have to the question is, that the 20th and 21st century warfare is Commandable not Controllable. In my view, it depends on several different factors:

- **Friction/ Outside interference:** Friction will always exist and will always make its presence felt, no matter how much support we get from C4ISR. As an example rain will always create some unforeseen problem that is not in the plane. The outside
will always change the setting for us, and we must be the ones that act, not reacts to what is happening on the battlefield and the enemy will not follow our plan.

- **C4ISR**: We can construct and issue all the radios, computers and technological solutions we can afford, but they will never get us full control, they will never get us the full picture, they will only give us command support.

- **Culture**: The world is changing, the civilians that makes out the military do not belong to a militarized society, and they are not part of the Old Prussian world of robotic obedience. The soldier and subordinates will not be degrade and be belittled by superiors just because. To be able to handle them and earn their loyalty, the officers has to trust his subordinates and use Directive Command that enhances and evolves the soldiers and the subordinate.

And still the armies such as the U.S. Army and the Israeli Army, exercise Restrictive Control as their preferred command system even when their regulations state that should use mission command (Directive Command) on the battlefields of today. So what is making them?

5:2 The conclusion on “Why do we still choose restrictive Control instead of Directive Command?”

The question that evolved naturally when I started to read more about command and control was – why do we still choose restrictive control instead of directive Command? I read about the different evidence concerning how excellent mission command was and all the benefits with exercising Directive Command but still, in example after example it was clear to see that the officers were still using Restrictive Control as their command system. Why did the officers adhere to a system that was proven to be wrong, to be not up to the strains of the real world? In my view and what I have found in the different sources, part of the answer lies in the three aspects that I have presented in the paper.

- **Culture**: The armies are still nurturing a culture within their different military academies and training centres that state the need for control in every aspect, if you are not able to say what your subordinates are doing at any given time you are a
bad officer. In these centres the culture of school solutions reigns supreme. The officers are trained into adhering strictly to doctrines and pre-made plans instead of playing what they have in the situation that they are in. This culture is also nourished by the outside interference.

- **C4ISR Integration**: The C4ISR equipment and solutions are here to stay and they will develop and flourish. The armies can either use these systems to aid the commanders with information and communications support and so forth or they can turn them into instruments of control and that is what has happened. The superiors have been given the chance to control everything and everybody no matter how far away, now everybody is within reach. Sadly to say but the superiors have acted and made their choices and they are exercising Restrictive Control because of the fear that the culture instils in them.

- **Outside interference**: Earlier the outside (the politicians and civilians) could not influence the tactics and the choice between Directive command or Restrictive Control, they were too far away to be able to control the armies in those matter. That notion has changed with the technology evolution that has occurred in the civilian society, what once took months to become known to the common man can now be known to them in under 24 hours. The media is influencing the outside senses and the outside is starting to demand more and more from the armies, things that the armies cannot answer because of the nature of war, a nature that civilians does not always understand. The armies stems from the outside and then has to adhere to their wishes but sometimes that adherence comes with a price, a price that sometimes is paid with the soldier’s blood.

The conclusion to the questions is in one way sad, but they are human. My simple conclusions is that war are Commandable not Controllable because how the world and the humans have changed to more technological and liberal and that makes them uncontrollable and the men that makes up the officers and soldiers will not be restrictively controlled. But because of how the world has changed with all the technology and information spreading over the world, the officers and politicians can be held more accountable and that makes the humans in them go for Restrictive Control. The armies and
Cadet Albert Hedberg Swedish Military Academy Karlberg and Helmut Schmidt Universität 2013

the outside have ended in a Catch 22 from lack of trust in the personal and sometimes trusting to much in technology53.

5:3 Summary of the conclusion

“The cultivation of bold, independent and imaginative thinking is of the greatest importance if the security of the nation is to be advanced.”


This paper and is author does not claim that it delivers a final answer on the questions that it addresses. In my view a bachelor thesis is not enough to answer this questions that are everything but simple and arbitrary, these questions have to be broken down even more and it is my strong opinion that an army has to meet these questions and find their own answers that fit their countries culture, but the discussion concerning the questions has to be open and allowed the time they need or they will keep on lying to themselves. One question that arose in the end and the one that I will end this paper with are: am I already predestined on how I will command as an officer and is everything that I have written in this text just views socialized into me during my many years in the army?

6 Suggestions for further research

The questions within the paper have become sources of new questions and especially new views. The question concerning culture inside the military organizations and how technology affects us human beings could and certainly does fill bookshelves. The constraintment of this being a Bachelor thesis is also felt when it comes to how deep I can go in certain aspects and questions. If the chance arises I would like to either do it myself

53 http://en.wikipedia.org/wiki/Catch-22_%28logic%29 viewed at the 14th of May 2013. The author recognizes the problem of reliability with Wikipedia as a source but is caught in a Catch 22 because it is the only available source that clearly states the meaning of the expression.
or see somebody else separate all the questions and aspects even more than it has been possible for me to do in this paper. The questions that sparked my interest the most after this paper are:

- The effect of the new generation’s culture upon Directive Command and Restrictive Control in the armies.
- How the armies should integrate C4ISR equipment without it becoming a leash or method of control.
- How the armies should handle their interaction and dependency of the civilian society when it comes to Restrictive Control and recruitment.
- “Why is 20/21st century warfare controllable not commandable?” turning my original question and see the results and ad other views or aspects.
- When can one use Mission command in a soldier and officers career?

The field of studies that constitute war science has newly been recognized in some countries as a separate field of studies. This gives it a lot of openings regarding which direction it wants to take in the future. The future will be interesting to see if it adhere to an already set path of another field or if it finds its own way forward to get the most out of it.

7 Reflections

Even if I did not come to the conclusions that I had expected when I started to write this paper it has given me a lot before my impending career with the Swedish Armed Forces. What it has given me are more understanding concerning the problems with command and control, what kind of frictions that can arise and make themselves felt. What aspect the superior might have to take into account when giving an order. It has made me more humble and made me understand the meaning of the bible quote “He without sin, shall cast the first stone” within command and control and that I will never know everything.

8 Acknowledgments

I wish to acknowledge and thank all the teachers and personal from the Helmut Schmidt University in Hamburg, The Swedish National Defence College in Stockholm, the Military Academy Karlberg and the Offzierschule des Heeres in Dresden for their assistance and
help they have extended to me during the writing of this paper. I want to especially thank
and acknowledge Dr Nassua, Dr Jonas, Mj Reimann, ObLt Markert, Mr Guneriasson
and Professor Meissner for all the help and support they have given me during my
writing.

9 References
Berlin: Ernst Siegfried Mittler und Sohn.


9 Internetsources

http://www.bur mastar.org.uk/epitaph.htm
http://militaryhonors.sid-hill.us/honors/kohima.htm
http://www.fhs.se/en/about-the-sndc/
http://www.forsvarsmakten.se/en/Organisation/Training-units/Armed-Forces-Command-
and-Control-Regiment-LedR/

http://www.dtic.mil/doctrine/dod_dictionary/?zoom_query=mission+command&zoom_sort=t=0&zoom_per_page=10&zoom_and=1


http://www.liveleak.com/view?i=c32_1367332518

http://www.cbsnews.com/8301-202_162-57582226/dramatic-video-appears-to-show-747-crash-in-
afghanistan/

http://diamondsixleadership.com/2013/02/07/leading-with-a-purpose-leaders-intent-to-
inspire-and-empower-your-way-to-business-success/

http://science.nasa.gov/astrophysics/focus-areas/what-is-dark-energy/

---

54 The front cover picture was borrowed from this site on the 14th of May 2013.