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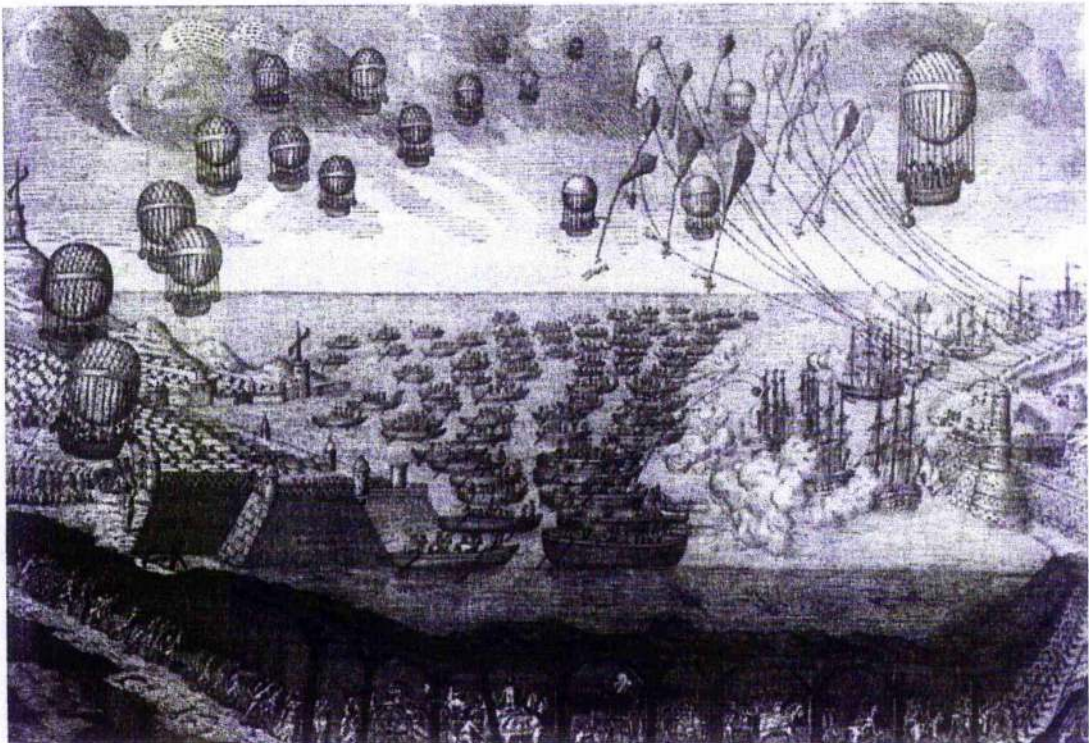
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"The Emperor's New Clothes"

Manoeuvre Warfare and Operational Art



Nils Jørstad

Thesis submitted for the Degree of Master of Philosophy
Department of Modern History
University of Glasgow

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ABSTRACT

Wars can be categorised in a number of ways, for example according to the conduct during conflicts, the means used and with regard to the belligerents' strategy, aims and objectives. One reason for categorising is to add precision to the language so we can better develop proper theories and methods, thus aiming at improving our fighting capability. In the wake of these theoretical exercises, new terms and sometimes, old terms used in a new way, are introduced.

Since the late 1970s, many lobbyists, military theorists and officers have described warfare in terms of a dichotomy: attrition and manoeuvre warfare. Manoeuvre warfare theory is a hybrid of selected historical examples and military theories developed under different contextual circumstances. The alleged paradigm shift in our approach to war has provided us with, or so we believe, a new methodology for conduct in war and the number of terms suited to describe an unambiguous theory. True manoeuvre warfare is expressed through operational art. This distinct approach to war has now been adopted by military forces throughout the western world.

This thesis looks closer at what manoeuvre warfare aspires to be, in the context of its terminology, methodology and its different national expressions. The first part of the thesis is concerned with a comparative analysis of different national manoeuvre warfare doctrines by using general systems theory and non-linear dynamics. The analysis reveals that, what we call manoeuvre warfare theory, has expressions that contradict each other and differ to the extent that the theory exists only in name.

The second part of the thesis is concerned with the historical substantiation of manoeuvre warfare. German military conduct, but first and foremost the Blitzkrieg-campaigns are often used to add credibility to the methods prescribed by manoeuvre theory. Some proponents of the theory have chosen General Guderian as the human manifestation of the true manoeuvrist.

By using the Clausewitzian term "Centre of Gravity", essential in manoeuvre theory as a departure point, the second part of the thesis analyses German military conduct and thought prior to the Second World War and the campaign in France 1940. Emphasis in the second part is put on German planning prior to the campaign and the conduct of the Wehrmacht's Army Group A during the execution. The analysis reveals that the German military interpreted Clausewitz in a way that is not compatible with strategic thought in modern democratic societies. The German pursuit of military effectiveness led to a tacticisation of strategy. Battles of attrition were fought with the highest degree of mobility. German military thought in the 1930's, manifested in the field manual *Truppenführung*, reveals a pragmatic approach to war, which indicates that there was no Blitzkrieg concept as such. Army Group A's conduct during the campaign in France also contradicts many of the principles and the methodology prescribed by the manoeuvrists. It appears that the ambiguous terms and selective historical examples have been interpreted and distilled to a degree where they eventually conform to the manoeuvrist thought.

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Abbreviations

ADP: Army Doctrinal Publication (British)
 AFM: Air Force Manual (US)
 AJP: Allied Joint Publication (NATO)
 BMD: British Military Doctrine
 FFOD: Norwegian Joint Operational Doctrine
 FM: Field Manual (US)
 JP: Joint Publication
 NDLO: Norwegian Doctrine for Land Operations
 OHL: Oberste Heeresleitung
 OKH: Oberkommando des Heeres
 OKW: Oberkommando des Wehrmacht
 SACEUR: Supreme Allied Commander Europe

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¹ Mykland, Knut, *Revolusjonstid – napoleontid*, (Oslo, 1993), 221. Unknown artist.

1 Introduction

"There is less here than meets
the eye"

"Mike, Wes, I see three tanks rolling out of the highway just outside Pristina. Get out there and kill them."³

When SACEUR, General Wesley Clark, was sitting in his office in Mons, Belgium, observing live pictures of the three tanks on his monitor, he might have been frustrated. After all, he had predicted a 40% probability that Milosevic would give in within three days after the first bombs had fallen.⁴ Sixty days had passed when he picked up the phone to call his subordinate responsible for the air campaign, General Michael Short. The Serbian leader was still playing.

This happened at a time when manoeuvre warfare had been around for some 20 years. By 1999 most NATO countries had, at least in name, embraced, adopted and made doctrines out of this presumably distinct approach to war. One NATO publication states: "NATO's military command structure is a particular strength. Since its inception, NATO has integrated diverse military forces to achieve common objectives using common doctrine."⁵ Clarke and Short did not seem to have common objectives. One was concentrating on tactical level Serbian army units in Kosovo. The other preferred so called strategic bombing, targeting power plants so there would be "no power to the refrigerator" for the common Serb.⁶

1.1 Belli Bipolus

Since the late 1970s, lobbyists, military theorists and officers have described warfare in terms of the dichotomy: attrition and manoeuvre warfare. The pre-eminence of manoeuvre warfare over attrition seems to be obvious. Manoeuvre warfare promises rapid decisive victories with minimum casualties. This contrasts with what they claim to be the traditional western style of war based on attrition. The proponents of manoeuvre warfare argue that the approach to war must be expressed through a comprehensive operational doctrine. Moreover, the conduct of war must be based on a thorough understanding of operational art. The historical substantiation of manoeuvre warfare, its theory and doctrines, is distilled from successful campaigns of the

² Tallulah Bankhead, American actress

³ Short, Michael, An Airman's Lesson from Kosovo, in Olsen, John Andreas, ed., *From Manoeuvre Warfare to Kosovo*, (Trondheim, 2001), 285. Short does not date the event.

⁴ Cordesman, Anthony H., *The Lessons and Non-Lessons of the Air and Missile Campaign in Kosovo*, (London, 2001), 25

⁵ NATO, AJP-3.4.1, *Peace Support Operations, Ratification Draft*, (2001), 1-3. [AJP-3.4.1]

⁶ Tirpak, John, A., Short's view of the Air Campaign, *Air Force Magazine*, (September 1999), 43

German Army in the world wars. According to one manoeuvre warfare proponent, "[t]he Germans developed the maneuver doctrine before and during World War II."⁷ However, the manoeuvre-attrition dichotomy has been extensively debated, at least in the U.S., since its introduction into military vocabulary in the 1970's.

The German military historian Hans Delbrück presented another dichotomy. There were two approaches to war: "*Vernichtungs-*" and "*Ermattungsstrategie*". A strategy of annihilation (*Vernichtung*) sought to destroy the enemy's military forces in a single decisive battle.⁸ This was a strategy of a force seeking the complete defeat of an opponent.⁹ A strategy of exhaustion (*Ermattung*) was practised more often by weaker nations, whose aims were limited, and who were unable to achieve victory through a decisive tactical battle. These nations followed a "two pole" strategy of battle and manoeuvre, aiming to win their political goal by exhausting their enemy to the point where the conflict could be terminated on favourable or equal terms. His proposal for the two strategies was also debated. It was not easy for German officers to admit that Fredrick the Great had resorted to *Ermattungsstrategie*. *Vernichtungsstrategie* was the order of the day.¹⁰

One Norwegian doctrine claims that Delbrück correctly described manoeuvre warfare as a two-pole strategy, where attrition and manoeuvre constituted the poles. What the doctrine refers to, but fails to mention, is that this is Delbrück's *Ermattungsstrategie*.¹¹ Is manoeuvre warfare similar to *Ermattungsstrategie*? As the manoeuvrists contrast manoeuvre warfare with attrition warfare, and as Delbrück contrasted *Ermattung* and *Vernichtung*, should one conclude that a *Vernichtungsstrategie* is attrition warfare?

Tjøstheim, writing in a Norwegian military periodical refers to the conduct of Fredrick the Great during the 7 Years War. He claims that during this period, manoeuvre warfare was primarily conducted at the strategic level. It did not contrast with attrition warfare. The strategic aim was to wear out the enemy, not to kill him.¹² If attrition warfare is the same as a *Vernichtungsstrategie*, and manoeuvre warfare is *Ermattungsstrategie*, and as Tjøstheim says,

⁷ Lind, William S., Some Doctrinal Questions for The United States Army, *Military Review*, (January/February, 1997), 138

⁸ Craig, Gordon A., Delbrück: The Military Historian, in Paret, Peter, ed., *Makers of Modern Strategy*, (New Jersey, 1986), 341-343

⁹ Rolf, Bertil, *Militär kompetens*, (Falun, 1998), 349

¹⁰ Craig, Delbrück, in Paret, *Makers*, 343

¹¹ Forsvarets Overkommando, *Forsvarets fellesoperative doktrine*, (Oslo, 2000), 47. [Norwegian Joint Operational Doctrine - FFOD]

¹² Tjøstheim, Inge, Generalmajor John F. C. Fuller: Det moderne manøverkrigskonseptets far, *Norsk Militær Tidsskrift*, (10/2000), 9

attrition does not contrast with manoeuvre, what, in the end, is actually being contrasted with what?

Mearsheimer makes a distinction between total war and unlimited war.¹³

- *Total war* seeks unconditional surrender and has unlimited political and military objectives. This involves complete defeat of the enemy armed forces in order for the attacker to impose his unconditional will on his opponent.
- *Unlimited war* seeks total defeat of enemy military forces. But it does not have to be a total war. The political objectives could be limited. If total defeat of the enemy armed forces is the objective, the attacker can choose between attrition and Blitzkrieg-style warfare.
- When a belligerent is following a strategy of limited objectives, the objective is to seize a portion of enemy territory [i.e. limited political objective]. In order to obtain this the attacker must defeat at least parts of the enemy armed forces. This can also be achieved by pursuing a strategy of attrition or Blitzkrieg. However, according to Mearsheimer it is possible to pursue a third type of strategy when one seeks limited objectives. This is the limited aim strategy. It emphasises minimising contact with the defender. It relies largely on surprise in order to strike before the victim can mobilise.¹⁴

Mearsheimer states that the distinction between war that seeks total defeat and partial defeat of the enemy is evident in Clausewitz's writings.¹⁵ First, if we relate Delbrück to Mearsheimer, a *Vernichtungsstrategie* could be either total war or unlimited war with the aim of complete defeat of the enemy. Second, Delbrück's *Ermattungsstrategie* seems to be similar to Mearsheimer's strategy of limited objectives. Since both derive their conclusions from Clausewitz, we may assume that this is a correct relationship. The quadrangular relationship between manoeuvre warfare, the doctrine and the two authors appears then to be beyond logical comprehension.

According to Aron, Delbrück, although he was contested, seems to have arrived at a conclusion about the two types of strategy that was close to what Clausewitz meant. Manoeuvre could be related to a situation where neither belligerent sought to overthrow one another, which in fact is the situation the Norwegian doctrine relates to. Both belligerents sought limited objectives and to avoid decisive battles.¹⁶

¹³ Mearsheimer, John J., *Conventional Deterrence*, (London, 1983), 29

¹⁴ Ibid., 30

¹⁵ Ibid., 29

¹⁶ Aron, Raymond, *Clausewitz, Philosopher of War*, (New Jersey, 1985), 75-76

For Clausewitz the term manoeuvre carried "the idea of an effect created out of nothing" and he compared it to the opening gambits in a chess game. The belligerents manoeuvred to gain an advantage over the enemy.¹⁷ Clausewitz realised that wars and campaigns evolved into decisive battles through manoeuvre. Manoeuvre and battle were both complementary and necessary means to an end. For the proponents of manoeuvre warfare, the term manoeuvre carries the idea of moving two pieces of chess, while the opponent only moves one.¹⁸

1.2 Aim and scope

This study will not discuss the attrition-manoeuve dichotomy as such. The assumption is that there is no such dichotomy. We will rather discuss the definition of manoeuvre warfare, as it is explained in the doctrines and literature, in the context of operational art and the German conduct of war.

Any new mindset as to how an organisation should conduct its affairs is difficult to enforce. One of the most important ways of overcome this difficulty is a common understanding of terms and methods. According to Schnarhorst, one of the fathers of the Prussian military reforms in the early 19th century, unambiguous principles and concepts that clarify the links between the parts of war and the whole are the basis for the formulation of a universal theory about war. The proper method of educating officers is first to provide them with the correct theory, and to encourage them to think independently and clarify their concepts.¹⁹

The debate on manoeuvre warfare and operational art as followed in military periodicals, experience in joint and combined operations and exercises, and as revealed in preliminary studies of a number of doctrines show that the framework for a common understanding of manoeuvre warfare may be lacking.

Moreover, the armed forces of the western world are downsized, while the number of their world-wide commitments is increasing. The consequence is that joint and combined operations are playing a greater role, and in many cases are imperative for the conduct of campaigns. Manoeuvre warfare doctrines, through their emphasis on joint operations, should be the smaller forces' solution to this development.²⁰ But a lack of common understanding will impede co-operation. The problem is not new. During the Second World War, when the allies did not have

¹⁷ Clausewitz, Carl von, Howard, Michael, Paret, Peter, eds., trans., *On War*, (Princeton, 1984), 541

¹⁸ Uhle-Wettler, Franz, *Auftragstaktik: Mission Orders and the German Experience*, in Hooker, Richard D., ed., *Maneuver Warfare, An Anthology*, (Novato, 1993), 238

¹⁹ Gat, Azar, *The Origins of Military Thought, From Enlightenment to Clausewitz*, (Oxford, 1989), 161

²⁰ O'Neill, Richard, *Modern US Army*, (London, 1984), 10. Manoeuvre warfare was supposed to be the answer to U.S. and NATO quantitative inferiority in the prospects of a war between the West and the Warsaw Pact in Europe.

any common operational doctrine, General Devers, Commander of the U.S. 6th Army Group, observed six areas as most worthy of consideration in coalition operations. These doubtless still apply:

- (1) "Characteristic lack of clarity and firmness of directives received from the next superior combined headquarters or authority.
- (2) The conflicting political, economic, and military problems and objectives of each of the allied powers.
- (3) The logistical capabilities, organisations, doctrines, and characteristics of each of [the] armed forces under command.
- (4) The armament, training, and tactical doctrines of each of the armed forces under command.
- (5) Personal intervention and exercise of a direct, personal influence to assure co-ordination and success in the initial phases of the mission assigned by the next higher combined authority.
- (6) The personalities of the senior commanders of each of the armed services of the allied powers under command, their capabilities, personal and professional habits, and their ambitions."²¹

It is not the aim of this thesis to prove anyone right or wrong. All the doctrines have merit in their own context. But as doctrines are supposed to be what is officially believed and taught about the best way to conduct military affairs, and because they are all "gospels" of the manoeuvre theory, the assumption is that they should provide those who read them with common ground. Why is that not so? Is the manoeuvre-attribution perspective as a dichotomy misunderstood? Is the consequence production of doctrines that do not facilitate the cognition of operational art or whatever that is supposed to be? Is this cognition hampered through the use of selective German campaigns to exemplify manoeuvre warfare? Do the selective use and mix of terms and methods from German military vocabulary and classical military theory reinforce the confusion? Moreover, do the doctrines represent a cognitive device used to instil a particular theoretical mindset about war that may be as dangerously narrow as *offensive à l'outrance*. There are both theoretical and historic empirical approaches to this.

²¹ Rice, Anthony J., Command and Control: The Essence of Coalition Warfare, *Parameters*, (spring, 1997), 160

1.3 Method and structure

The first section of this thesis will seek to clarify what manoeuvre warfare is supposed to be. General systems theory and non-linear dynamics will be used to link this clarification to the manoeuvrist notion of operational art. Thereafter I will examine the doctrines in order to find, analyse and discuss those elements that may cause different interpretations. The objective is first to determine whether the methods and terms used in manoeuvre warfare doctrines conform to any of the theories. Second, by analysing the doctrines it will be possible to derive criteria that may be used to analyse the historical substantiation of manoeuvre warfare in the third section.

Several different national, alliance and service doctrines are used. As manoeuvre warfare started in the United States, and because of the U.S. Army's major influence on doctrinal thinking among its alliance partners, emphasis is put on the main American service doctrines. The British also play a prominent role as a major contributor to coalition warfare. Together with many of the European states, Britain introduced manoeuvre warfare at a later stage. The British perspective on the topic is assumed to represent a matured and European view. NATO doctrines are also used, assuming that they represent the alliance's common understanding of manoeuvre warfare. In addition, Norwegian doctrinal publications are considered. As a small country Norway is often confronted with a dilemma as to whether to follow its own way or to conform to either the alliance or one of the major military nations. The doctrines considered represent all services. However, army doctrines are stressed. As manoeuvre warfare doctrines are supposed to express operational art, thus embracing joint and combined warfare, the analysis will uncover differences with regard to the various services and countries.

The third section in this thesis concerns the historical substantiation of manoeuvre warfare. Examples from German military history and theory are often used to illustrate various points on how to conduct manoeuvre warfare, maybe in order to substitute for the lack of explanatory theories in the doctrines. According to Lind, "Blitzkrieg was conceptually complete by 1918.[...] This is manoeuvre warfare."²² Was the German campaign of 1940 an expression of operational art, thus deserving a prominent role as a model for the explanation of manoeuvre warfare?

²² Lind, William S., *The Origins of Maneuver Warfare and its Implications for Air Power*, in Olsen, *From Manoeuvre Warfare*, 28-29. See also Higgins, George A., *German and U.S. Operational Art: A Contrast in Manoeuvre*, *Military Review*, (October, 1985), 24. "[...]Blitzkrieg warfare against numerically superior Soviet forces on the Eastern Front was essentially a maneuver doctrine."

2 Manoeuvre warfare

The implementation of the *Active Defence* doctrine in 1976 and manoeuvre warfare revealed the necessity for the development of a proper terminology and theory. Not only were the answers sought through the study of German military history in general and German performance during World War II in particular. There was also, perhaps because the publication of the new doctrine coincided with a new translation of Clausewitz's *On War*, a renewed interest in the classical military theories. Following the interest in Clausewitz, other military theoreticians were rediscovered, of which Sun Tzu, Liddell Hart and Jomini have become the most influential. Soviet military theory was also studied. The result of these studies is a hybrid of German military history and philosophy, a notion of the Napoleonic art of war, ancient Chinese wisdom, British common sense and Soviet military theory.

Less than ten years after the doctrinal concept was born, the first major work written on the subject gave both manoeuvre and attrition warfare the status of theory.²³ In this chapter we will look more closely at what this might be.

2.1 The physics of manoeuvre warfare

According to authors on manoeuvre warfare, their theory, not very surprisingly perhaps, consists of both psychological and physiological elements. In their opinion time is the key discriminator between manoeuvre and attrition warfare. "Manoeuvre warfare is an intense contest for time."²⁴ War is planned and executed on the basis of a preconceived appreciation of the time-distance relationship. Manoeuvre theory attempts to upset an enemy's calculations of this relationship. The authors bring up two equations from Newtonian physics in order to illustrate how a military force can be manipulated in the contest for time.

Momentum = Mass x Velocity

"Momentum" is a unit's operational worth. Mass is a unit's physical combat power.²⁵ Velocity is a vector quantity and is expressed as distance over time.²⁶ The second equation is:

Force = Mass x Acceleration (change of rate in velocity)

²³ Simpkin, Richard E., *Race to the Swift*, (London, 2000), 19

²⁴ Leonhard, Robert, *The Art of Maneuver*, (Novato, 1994), 82

²⁵ Simpkin, *Race to the Swift*, 22. The term "combat worth" is concerned with the effects of weapons based on precision, calibre, rates of fire, quantity etc.

²⁶ Mass is normally measured in weight. The manoeuvrist assumption is that more weapons and more firepower normally will increase a unit's weight. See for example British Ministry of Defence, Chief of the General Staff, *The British Military Doctrine, Design for Military Operations*, (1996), chapter 4, 24. [BMD]

"Force" is here defined as the "applied will" of the commander of a unit [i.e. it is the commander's will expressed through orders that eventually will make a unit move]. Mass is defined as in the first equation. Acceleration is the rate of change in velocity. Acceleration then is the measure of how quickly a unit can change from zero velocity to its maximum velocity toward an objective. However, the acceleration factor's most important feature is how quickly the mass can change its direction. If the mass is heading from point A to B, and suddenly is tasked to head towards point C, how quickly can the mass respond to the new task? When, for example, the German Army Group A poured some 40 000 vehicles into the Ardennes on 10 May 1940, pushing the road system towards its limits, it had a very low acceleration. Any orders to head in a direction than the one the units were supposed to follow, would have produced a catastrophic traffic jam.

According to Leonhard, "Force" is complementary to "Momentum" and vice versa. If a unit [i.e. mass] has poor acceleration [i.e. low change in velocity], it will affect its momentum. One may exemplify this by a commander that can not apply his will because of an inefficient staff. This will cause the unit to be slow to respond [i.e. accelerate] to the commander's orders. The applied will of the commander is also affected by the degree of momentum. If the staff does excellent work in applying the will of the commander, it will not matter if the unit is foot mobile in a high-speed environment. Moreover, by increasing the velocity the operational worth will also be increased. This will also be the effect if one increases the mass. But it is important to note that according to manoeuvre theory an increase in the mass is not desirable. An increase is synonymous with an attritional approach to war. According to the proponents of manoeuvre warfare, the philosophy behind attrition theory is that it is aimed at the destruction of the enemy's mass through the application of one's own mass. But the enemy may be able to absorb the attack. By using the dynamics of velocity in accordance with the philosophy behind manoeuvre warfare, one aims at weaknesses in the structure of the enemy mass. One will then be able to penetrate deep. The penetration will create a greater shock. It enables the attacker to destroy the enemy from within. It will overtax the enemy command and control systems. Some manoeuvrists claim that manoeuvre warfare is about a systemic approach.²⁷ The belligerents are systems that are made up of interrelated elements. The systems are influenced by the factors of mass and will, and the time/distance relationship. In contrast, attrition warfare, the manoeuvrists say, is primarily concerned with mass and thus the exchange of fire.

²⁷ Forsvarets overkommando, *Forsvarets doktrine for landoperasjoner, 3. utkast*, (Oslo, 2001), 19. [Norwegian Doctrine for Land Operations - NDLO]

The merging of different theories, historical experiences and philosophies into a new theory has created a new terminology – or, perhaps old terminology used in a new way. Manoeuvre warfare is primarily based upon three interrelated concepts. The interrelation is governed by operational art. The concepts are:

- (1) The centre of gravity
- (2) Mission command
- (3) Combined arms

In the next sections an explanation of each of the three concepts will be given.

2.1.1 Centre of Gravity

The term centre of gravity is taken from Clausewitz's work, *Vom Kriege*. Its definition is quite simple and borrows from Newtonian physics.²⁸ Clausewitz defined it as "the hub of all power and movement, on which everything depends. That is the point against which all our energies should be directed."²⁹ It is the elimination of the enemy's and protection of one's own that will lead to the successful conclusion of a war. In the German language, the term "centre of gravity" is called *Schwerpunkt*. Despite differences of language, one might assume that Newtonian physics would be applied in the same way. This may not be so.

The centre of gravity seems to be the most discussed concept among those who have adopted manoeuvre warfare. That the U.S. Air Force in its 1992 manual defined it as the "hub and power of all movement" instead of "the hub of all power and movement" may of course have contributed to the lack of agreement.³⁰ We will venture into the realms of the centre of gravity and/or *Schwerpunkt* as *Das Ding in sich*, to use a phrase from Kant, when analysing the doctrines. According to the manoeuvrists, the centre of gravity is the departure point for all plans and the subsequent execution. Therefore, the concept is supposed to be an instrument with which to determine what it is important to protect or attack and what are the strengths and weaknesses. Discussions about the centre of gravity are mainly centred on whether it is something weak or strong, or both. Moreover, is it one or several? On what level of war is it found? Meilinger claims, for example, that "[c]enters of gravity can be [...] strengths, but they can also be a

²⁸ Tollefsen, Torstein, et.al., *Tenkere og ideer*, (Oslo, 1997), 312

²⁹ Clausewitz, *On War*, 595-596

³⁰ U.S. Air Force, AFM1-1, *Basic Aerospace Doctrine of the United States Air Force*, (1991), 276 [AFM1-1]

vulnerability.”³¹ How does one relate to a centre of gravity according to the manoeuvrist literature and doctrines?

The path to the elimination of a centre of gravity is through lines of operations. In its simplest form, the line is a cognitive tool, a scheme or stratagem, that helps the belligerents to determine the actions to be taken, phased in time and space. The concept is basically taken from Jomini's work *The Art of War*, although other theorists have come up with similar ideas. The term "decisive points" is also of Jominian origin. Which points are decisive? Along a line of operation one or several events may be of such a character that the outcome results in a significant change in the chances of winning the war. The aim, according to some doctrines is to destroy the enemy. For others it is to dislocate him.³² One can try to predetermine the point through planning. But a decisive point can of course be an event that was not anticipated. In the latter case one must often choose a new line of operation. Decisive points can for example be related to geography or to a single battle.³³

Two types of lines of operation have a significant importance in manoeuvre warfare. From Liddell Hart one has borrowed "the line of least resistance" and "the line of least expectation".³⁴ Using one or both of these lines to approach a centre of gravity is called the "indirect approach". If the direct approach is used, the enemy will know that you are coming. He will prepare, and the path will turn into one of most resistance. That will lead to a battle of attrition. Strength is pitched against strength. The manoeuvrist school realises of course that there are thinking enemies. The paradoxical logic of war sometimes leads to a situation where what one belligerent regards as the line of least expectation, is also regarded as such by the enemy. The belligerent who thought out a clever way to surprise his enemy may then be surprised himself.³⁵ The solution to this problem was found in ancient Chinese wisdom. Sun Tzu, who lived some 2000 years ago, developed the idea of the "ordinary force" and "extraordinary force".³⁶ The extraordinary force was a more mobile and agile force than the ordinary. By using the less mobile ordinary force one could fix the enemy to his position. One could convince him that the ordinary force was the most important to destroy. It then functioned as "The Matador's Cloak" to

³¹ Meilinger, Phillip S., Air Strategy – Targeting for Effect, *Aerospace Power Journal*, (winter 1999), 48

³² See for example NDLO, 22-23 and U.S. Army, *Field Manual 100-5, Operations*, (1993), 2-4. See also Leonhard, Robert, *The Principles of War for the Information Age*, (Novato, 2000), 64, for positional, functional, temporal and moral dislocation.

³³ Jomini, Antoine Henri de, *The Art of War*, (London, 1992), 85-86

³⁴ Liddell Hart, Basil Henry, *Strategy*, (New York, 1968), 348

³⁵ Luttwak, Edward N., *Strategy, The Logic of War and Peace*, (Massachusetts, 1987), 18

³⁶ Simpkin, *Race to the Swift*, 37

use an expression from Liddell Hart.³⁷ In such situations one created the opportunity of using a line of least expectation, and even that of least resistance. While the ordinary force was busy fighting the enemy, the extraordinary force could make an unexpected move and attack the enemy from behind or on his flanks. The enemy who let himself be fooled would of course have an attritional approach to war. The indirect approach seemed to fit the physics of war. By choosing a line of least resistance or least expectation it is possible to increase the momentum. Because of less resistance one can travel greater distances over time. There is a greater velocity. "Momentum" is complementary to "Force", the applied will of the commander. The manoeuvrists increase "Force" and accelerate faster through the use of "*Auftragstaktik*", or literally mission command.

2.1.2 Mission Command

*"Theirs not to make reply. Theirs not to reason why.
Theirs but to do and die."*³⁸

The manoeuvrists claim that the idea of directive control is derived from German military culture.³⁹ Mission command implies that the commander should issue general directives, rather than orders. Within an agreed framework, he leaves the subordinate free to choose the means and methods he wants in order to achieve a satisfactory end state. The formulated end-state expresses the commander's intention; hence the subordinates' guidance is the intention.⁴⁰ As opposed to a detailed order on what to do and how to do it, a shorter statement on what end state one wishes to achieve saves time.⁴¹ Less time is lost on making and disseminating elaborate plans and operation orders. Accordingly, this allows subordinates, and the unit as a whole to operate faster and with greater agility than the enemy does. It keeps the enemy off balance and he is unable to respond coherently. The method of mission command will, theoretically, increase the factor "Force", the applied will of the commander. The commander does not need a large staff to work out his orders. A short statement of what he wants lets the executor start almost immediately.

³⁷ Liddell Hart, Basil Henry, *The Other Side of the Hill*, (London, 1978), 159

³⁸ Alfred Lord Tennyson, "Charge of the Light Brigade" in Wintle, Justin, ed., *The Dictionary of War Quotations*, (London, 1989), 276

³⁹ The term "directive control", "mission tactics", "mission command" and "*Auftragstaktik*" are the four different terms to express the same phenomenon. Simpkin, *Race to the Swift*, 228-229, proposes the use of directive control as he sees some linguistic implications of directly translating *Auftragstaktik* into English.

⁴⁰ Lind, William S., *Maneuver Warfare Handbook*, (Boulder, 1985), 30

⁴¹ The manoeuvrist notion on what orders in the attrition environment are, seems to be somewhat misplaced. See for example Kommanderende General, *Kompaniets utdannelse i strid*, (Oslo, 1926), 23, Forsvarets overkommando, *Ordregivning på kompani og troppsnivå*, (Oslo, 1978), 6, Hærens Overkommando, *Stabshåndbok for Hæren*, (Oslo, 1966), Chapter 4. There are no differences between the manoeuvrists and these pre-manoeuve era publications regarding the definition and the purpose of orders and directives. That one resorted to detailed orders on what and how to do it, in the pre-manoeuve era are rather expressions of a cultural trend and the fact that most nations based its armed forces on conscripts.

The manoeuvrist proponents emphasise that the subordinates must know the intentions of the commander two levels up.⁴² By knowing the higher echelon's intention, the subordinate will be able not only to accomplish missions given by his immediate superior, but also in some circumstances to accomplish or enhance the chances for accomplishment of the mission of his superior two levels up. The commander's intent should also be a statement of the desired effect upon the enemy force. Departing from the attritionist axiom that conquering terrain is an important criterion for success, the manoeuvrists claim that the "[t]he emphasis is on the defeat and disruption of the enemy rather than attempting to hold or take ground for its own sake."⁴³ The "acceleration" is theoretically increased because the executor relates to what the commander wants to accomplish in relation to the enemy. If the executor has to wait for new orders every time the enemy changes his disposition, it reduces his ability to accelerate. By knowing the intention two levels up, the executor is able to increase the acceleration even further. Thus we get a notion of synergetic effects.

The underlying theory regarding directive control is the OODA-loop.⁴⁴ It is essentially based on the observations of a fighter pilot in aerial combat during the Korean War. The OODA-loop is the cycle a human goes through when interacting with his environment. The person **O**bserves. He then **O**rients. In this phase he determines what is observed and what options are available. He then makes a **D**ecision on what to do, and finally he **A**cts. This cycle is continuously repeated as part of human nature and man's interaction with the environment. The enemy with a slower OODA-loop becomes reactive. The manoeuvrists use the theory in an organisational/systemic context. The organisation that goes through the cycle the fastest will, over time, create a growing gap between its actions and the enemy's reaction. The Boyd cycle is a subset of acceleration. An improvement in the ability to cycle through the OODA-loop will increase the ability to accelerate.

⁴² Lind, *Maneuver Warfare Handbook*, 13. See also U.S. Army, *Field Manual 100-5, Operations*, 6-6, [FM 100-5] and Beaumont, Roger, *The Nerves of War*, (Washington 1986), 48, 75. Beaumont refers to the Russians in relation to the idea of knowing the intention two levels up.

⁴³ BMD, chapter 4, 56. See also FFOD, 100

⁴⁴ Beckerman, Linda, P., *The Non-Linear Dynamics of War*, (1999), http://www.belisarius.com/modern_business_strategy/beckerman/non_linear.htm

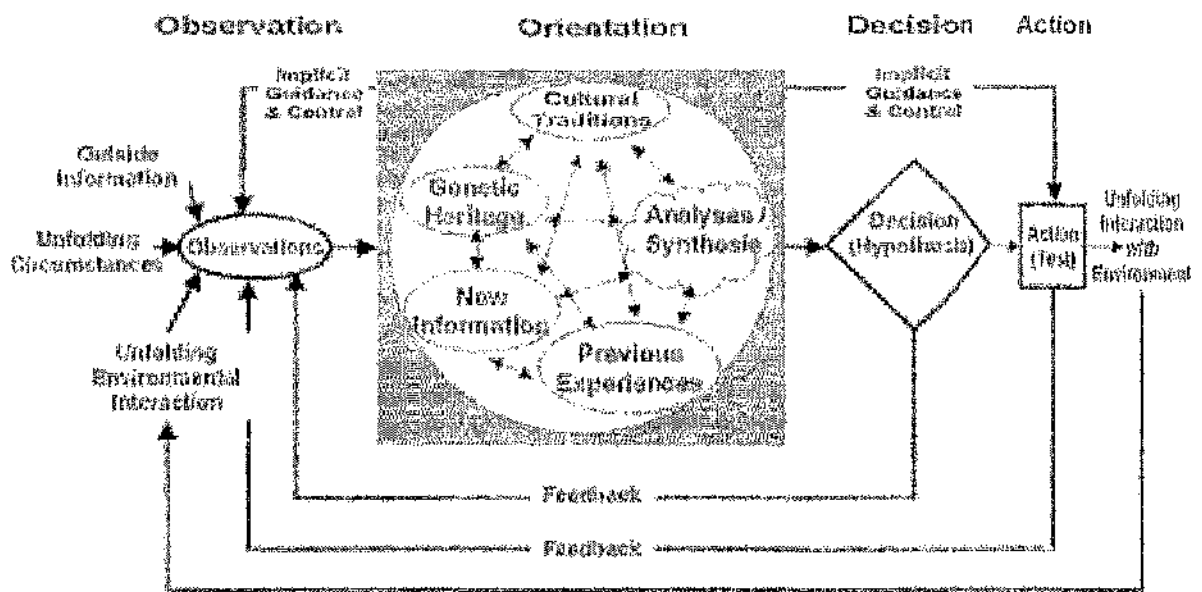


Figure 1: OODA-loop

Mission command also stimulates the creativity of the subordinate. The subordinate is the one who is supposed to know the environment he is to operate in best. Thus he knows best how to accomplish his mission. The degree of freedom enjoyed by the subordinate may also express the manoeuvrists' view of the intellects of the armed forces. An American training manual from 1951, a time when the U.S. Army is supposed to have had an attritionist approach, says on the need to keep orders simple: "It is said that General Grant had a certain captain on his staff with whom he discussed his most important orders before issuing them. He explained, [...] that he considered this captain so "dumb" that he felt confident that any order clear to the captain could not fail to be understood by anyone."⁴⁵

This passage illustrates a view of the lower ranks common in many armed forces throughout the centuries. In the German case, some contemporary Germans claim, *Auftragstaktik* grew out of social reforms in the 19th century.⁴⁶ It is linked to what the Germans today call *Innere Führung*. This is the image of the man as a free person. The dignity and rights of liberty of all citizens, and therefore all soldiers, are respected. Through the commitment to the moral-ethical standards of society, the soldier recognises that the values of the community have to be defended. In order to employ *Auftragstaktik* successfully as part of the manoeuvrist culture, soldiers must be

⁴⁵ U. S. Army, *The Essentials of Military Training*, (1951), 52

⁴⁶ Uhle-Wettler, *Auftragstaktik*, in Hooker, *Maneuver Warfare*, 240-241.

committed to values of their society.⁴⁷ The Germans put *Auftragstaktik* into a broader context and it becomes an ethical issue. It deviates from the manoeuvrists of other countries, who tend to put mission command in relation to certain personality traits. In their view, the soldiers must express self-confidence, stamina and the desire to accomplish missions. They must also have an offensive spirit, be intuitive, aggressive and willing to take risks. Not showing initiative is unacceptable.⁴⁸ Another army in a not so distant past once wanted soldiers that looked upon war as "an exhilarating experience approached with relish, an opportunity to master fear and transcend bodily limits, the ultimate virile sport, a supreme fulfilment of one's self."⁴⁹

Mission command may have a synergetic effect. The notion of synergy will be taken a bit further when we look at the manoeuvrists' relation to firepower and combined arms.

2.1.3 Combined Arms

The manoeuvrists do not agree on the importance of firepower. One doctrine for example, claims that all wars involve the use of both firepower and mobility. But what characterises the attritionist approach to war is its reliance on firepower at the expense of mobility. In manoeuvre warfare it is the other way around.⁵⁰ Some manoeuvrists claim that firepower is very important. "Some people have accused maneuver warfare advocates of downgrading the importance of firepower. Nothing could be further from the truth."⁵¹ The issue is the purposes for which firepower is used.

On the physical level, manoeuvre warfare is concerned with the interaction between mass, time and space. The increase of the mass will lead to an increase in firepower. There will be more and heavier weapons.⁵² However, according to the manoeuvrists, this will primarily be useful when applied in relation to an attack on the principal enemy mass. That is what they should avoid attacking. In attrition warfare a unit manoeuvres on the battlefield in order to get in a better firing position. Firepower is applied with the purpose of reducing the number of enemy troops and equipment. In manoeuvre warfare it is the opposite. A unit uses firepower in order to manoeuvre. Apparently, firepower is used to enhance the dynamism of velocity. By fire and manoeuvre one seeks to create a series of unexpected and dangerous situations for the enemy.⁵³ This implies

⁴⁷ Widder, Werner, *Auftragstaktik and Innere Führung: Trademarks of German Leadership*, *Military Review*, (September-October 2002), 5

⁴⁸ Hooker, Richard D., *Implementing Manoeuvre Warfare*, in Hooker, *Maneuver Warfare*, 227

⁴⁹ Gat, Azar, *Fascist and Liberal Visions of War*, (New York, 1988), 82

⁵⁰ FFOD, 47

⁵¹ Lind, *Maneuver Warfare Handbook*, 19

⁵² Crevelld, Martin van, *Air Power and Maneuver Warfare*, (Alabama, 1994), 15. According to Crevelld's studies, a force designed to be agile and to conduct high tempo operations will require a smaller logistical tail.

⁵³ Lind, *Maneuver Warfare Handbook*, 19

however that the enemy must perceive the manoeuvring units as capable of delivering some life-threatening fire, and that the enemy is not very willing to die for what he believes in. This does not seem to be a matter of concern.

Manoeuvre warfare "is joint and combines the resources of all arms and services."⁵⁴ Based on this Leonhard presents the "Combined Arms Theory". This theory contains a dialectic between a "complementary" and a "dilemma" principle.⁵⁵ The complementary principle states that by combining the various combat arms into a single organisation, one can compensate for each arm's weakness through another arm's strength. The dynamics of the complementary relationship are aimed at nullifying one's own weaknesses by the combination of arms. The dilemma principle expresses the notion that through proper employment of various combat arms serves to complement each other with respect to the enemy [i.e. in order for the enemy to defend himself from one arm, he may become vulnerable to another]. According to Leonhard, in order to reduce the amount of attrition, the combination of arms must be synergistic. If both the enemy and one's own forces nullify their weaknesses, victory will go to the belligerent with the most resources.

2.2 Conclusion

The three concepts put less emphasis on imposing order on the battlefield. War is accepted as fluid, chaotic and non-linear.⁵⁶ However, the British Army's manoeuvre doctrine does not agree entirely on this. Accordingly, "[t]o succeed, an Army needs to be able to create order out of the chaos of war."⁵⁷ But for most manoeuvrists, chaos and fluidity in war should be utilised through the proper application of operational art. This has validity in any type of conflict from low intensity wars to the nuclear battlefield.⁵⁸

3 Operational art

The prevailing view among the manoeuvrists is that attrition warfare is essentially linear and that manoeuvre warfare is non-linear. But the manoeuvrists discuss the features of non-linearity in several dimensions. Leonhard, for example, claims that: "Non-linearity, [...], is at best a false

⁵⁴ BMD, chapter 4, 56

⁵⁵ Leonhard, *The Art of Maneuver*, 91. See also Luttwak, *Strategy*, 29

⁵⁶ See for example U.S. Marine Corps, Doctrinal Publication 1, *Warfighting*, (1997), 9, Lind, *Maneuver Warfare Handbook*, 7, and FFOD, 53

⁵⁷ BMD, chapter 4, 3. See also Creveld, Martin van, *Command in War*, (Massachusetts, 1985), 183. "Where the British [...] feared disorder of all things, the Germans accepted it as inevitable and sought to circumvent the problem by putting a heavy emphasis on independent action by subordinate commanders and even by individual men."

⁵⁸ Downing, Wayne A., *Firepower, Attrition, Maneuver*, U.S. Army Operations Doctrine: A Challenge for the 1980s and Beyond, *Military Review*, (January/February, 1997), 149. See also FFOD, 50

goal and at worst a failure to appreciate the geometry of war."⁵⁹ Accordingly, manoeuvre warfare is obviously linear. Leonhard regards non-linearity as totally meaningless. He also claims that within manoeuvre theory one uses lines of length, lines of width and lines of operations. To emphasise non-linearity is identical to fighting wars with many unrelated battles with small, unrelated units.⁶⁰ Creveld claims that manoeuvre warfare is thrust line oriented, with wide, and often unequal and variable gaps between the attacking thrusts. However, he also claims that attrition warfare is linearly oriented, with units packed closely together and with flanks tied in tightly.⁶¹ In this thesis non-linearity has nothing to do with these authors' understandings of the term. It is not about the geometrical features of linear formations. Nor is it about mathematical formulas, such as those Bülow proposed in the *Spirit of the Modern Systems of War* in 1799. He claimed that success depended upon a maximum angle of 90 degrees between the base, objective and unit's line of operation.⁶² In this thesis linearity will be related to general systems theory and non-linear dynamics.

3.1 General system theory and non-linear dynamics

In general systems theory one differs between open and closed systems. A closed system does not interact, nor is it affected by circumstances outside itself.⁶³ Open systems engage in interchanges with the environment. The interchange is essential for the systems' viability.⁶⁴ Organisations, for example the belligerents in a conflict, deal with the interrelation of a great number of variables, which occur in the fields of politics, economics, industry, commerce, military conduct etc.

According to Bertalanffy, systems have three parameters in common:

- the quantitative, which is concerned with the number of *elements* in the system as a whole;
- the material parameter is concerned with the type of *species* within the system as a whole; and
- the qualitative, which relates to the *attributes* in the relations of the elements.⁶⁵

All elements have certain characteristics and behaviours, which are the same both inside and outside a system as long as there are no interactions. The certain characters and behaviour are

⁵⁹ Leonhard, *The Art of Maneuver*, 90

⁶⁰ Ibid., 194

⁶¹ Creveld, *Air Power and Maneuver warfare*, 9

⁶² Gat, *The Origins of Military Thought*, 81

⁶³ Rossvær, Tore, *Organisasjonsteorier i sosiologisk belysning*, (Oslo, 1987), 93

⁶⁴ Scott, Richard W., *Organizations: Rational, Natural and Open Systems*, (New Jersey, 1992), 76

dependent upon what species they are. With no interaction the characters and behaviour are called summative and obey the rule of additivity. Theoretically, this is a linear system.

The essence of the system centres on the existence of an interaction. Each element within the system has constitutive characteristics/behaviour in addition to its above mentioned summative characteristics/behaviours. Constitutive characteristics are those which are dependent on the specific interaction within the system.⁶⁵ Interaction means that the elements within a system become inputs to each other. The product that results from the interactions between the elements is called "emergent behaviour".

*Emergent behaviour is the collective behaviour that results from interactions between elements, whose individual behaviour is other than the emergent behaviour.*⁶⁷

In non-linear systems, the emergent behaviour will be either greater or lesser than if each individual behaviour is added together. This can be achieved by changing the interaction through control parameters. Synchronisation is such a control parameter. A high degree may lead to a situation where there are fewer available options for the system. If one species/element is slower, the other must wait. The slowness becomes an input to the other elements. On the other side, no synchronisation may lead to chaos. The control parameters determine a system's state. It affects the inputs that perturb the interactions within the system. In the context of war there is no such thing as a linear system. However, there are greater or lesser degrees of linear actions and thinking.

The manoeuvrists claim that attrition warfare occurs when a belligerent system assumes that combat power is directly proportional to the number of combatants and their weapons. The attritionists then express linear thinking. In Clausewitz's words, "[t]hat would be a kind of war by algebra. Theorists were already beginning to think along such lines when the recent wars taught them a lesson."⁶⁸ According to Beckerman, it is also linear thinking when a military force introduces a new weapon system to create an effect that is equivalent to several other older weapon systems.⁶⁹ The introduction of "Smart" bombs versus "Dumb" bombs may illustrate Beckerman's point. Linearity is also the case if the system continues to act in the same way, regardless of a change in the enemy's behaviour. Luttwak illustrates an extreme form of this. "For a primitive tribe whose entire force consists of identically armed warriors who always fight

⁶⁵ Bertalanffy, Ludwig von, *General System Theory*, (New York, 2003), 54-55. For the purpose of this thesis systems and organisations are the same. Bertalanffy also uses the term "complex".

⁶⁶ Bertalanffy, *General System Theory*, 55

⁶⁷ Beckerman, *The Non-Linear Dynamics*, 3. The term "agent" is used instead of "element".

⁶⁸ Clausewitz, *On War*, 76

in a single formation, the tactical operational, and strategic must coincide for all practical purposes. Such a tribe cannot suffer a tactical defeat that is not also strategic, nor can it develop a method of war that is more than tactic.”⁷⁰ The manoeuvrist often uses the U.S. Armed Force’s “body-count” during the Vietnam War is an example of linear and attritional thinking.⁷¹ Success is measured in quantitative results, regardless of a change in enemy behaviour. According to Senge this occurs because we tend to view the environment as linear chains of cause and effect.⁷² We think that the result of our action is the direct effect on the adversary. But that is only part truth. The result of our action also affects his adaptation to our actions and the subsequent action he himself chooses.

A non-linear system is able to exhibit multiple stable states. Upon perturbation, the system has the ability to bifurcate into multiple states of which each can be stable. However, the number of possible stable states for a non-linear system is limited. Further bifurcation will eventually lead towards chaos and instability. This could for example happen if there was a dramatic change in the interconnections of the system. A formal hierarchical system that transforms itself into a matrix could experience these problems. Between the multi-stable and the chaotic region is what Beckerman calls the “opportunistic region” [i.e. “The Edge of Chaos”]. It is so called because there are so many stable states available. This region can be reached by changing the intensity of the control parameters, such as a reduction of synchronisation. The control parameter is that which determines how many states there are available. In relation to the OODA-loop, the assessment of the availability of states occurs in the orientation phase. The recognition of the actual situation determines the decision as to what to do. The decision leads to an interaction that changes the structure.

⁶⁹ Beckerman, *The Non-Linear Dynamics*, 2

⁷⁰ Luttwak, *Strategy*, 92

⁷¹ FFOD, 118, 47. The adherence to “body counts” can also be found in manoeuvre doctrines. FFOD says for example that end-states must be described with concrete and quantifiable criteria.

⁷² Senge, Peter M., *Den femte disiplin*, (Oslo, 1999), 81

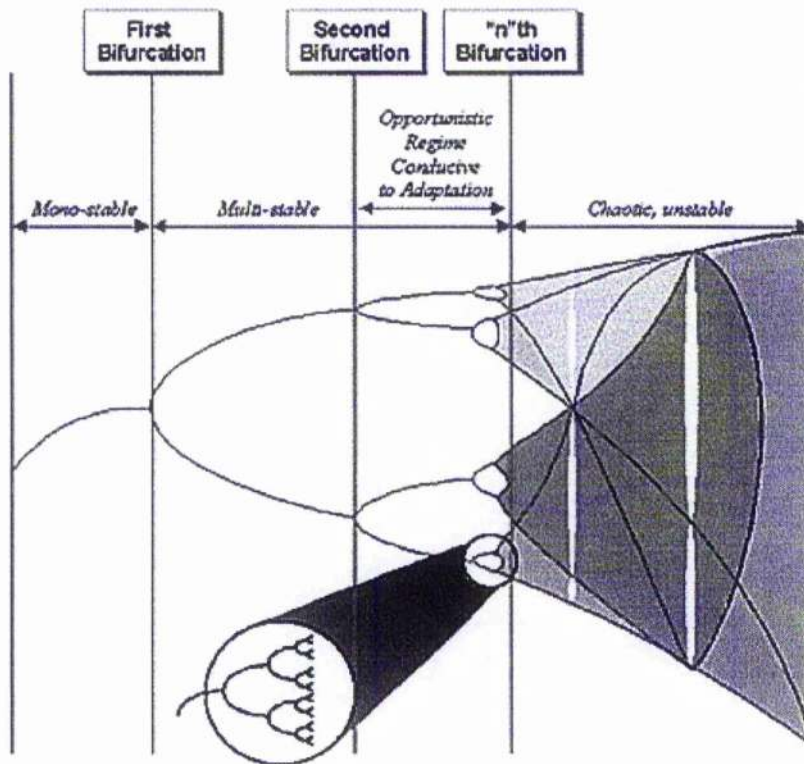


Figure 2: Bifurcation

One critical factor is the system's ability to recognise an actual situation. That is a matter of intelligence. However, one can have near perfect intelligence of the enemy dispositions, but never on what he thinks, although that might be reflected by his dispositions.⁷³ It is possible to assume that the type of technical intelligence assets that are preferred by the western military would lead towards a mono-stable state. They enhance the ability to act in a certain pattern, which is the destruction of targets. That seems to be contrary to the manoeuvrist approach. And because war aims to achieve asymmetries in different fields, an enemy will adapt to this sort of threat.

The other critical factor is the interdependence within the systems. Synchronisation will also lead towards a mono-stable state. General Short, whose staff prepared the Air Tasking Order 24 hours in advance during the air campaign against Serbia in 1999, could not easily task aircraft to please SACEUR's immediate wishes. Within the time perspective at this level in the hierarchy, General Short's air organisation was closer to a mono-stable state when tasked to attack the tanks Clark

saw on his monitor. The task given by the commander also reveals a rather linear way of thinking.

3.2 Closing in on Operational Art

Naveh relates general systems theory to a military system.⁷⁴ The nature of traditional military systems is that of a hierarchical structure. This leads to a columnar mode of interaction between the system's elements, or between the sub-systems within the overall system. This means that the emergent behaviour is determined by and develops from the rear/depth towards the front. It does so in an interdependent sequential mode through the echelons. A military system then has two distinct characteristics:

- The first characteristic is that of succession and echelonment.
- The second characteristic is the absolute dominance of the system's aim.

According to Naveh, "[t]he definition of the aim is the cognitive force that generates the system and determines the directions and patterns of its action."⁷⁵ The aim provides the system with its unifying determinant and creates cohesion. In order to get the system into the desired direction, the aim must be translated to concrete objectives for the individual elements within the system. However, the formulation of aims and objectives creates what he calls cognitive tension between the abstract direction of the system's overall aim and the concrete actions the elements have to perform in order to achieve their own objectives. Bertalanffy explains this:

"The positive progress of the system is possible only by passing from a state of undifferentiated wholeness to differentiation of parts. This implies, however, that the parts become fixed with respect to a certain action. Therefore, progressive segregation also means progressive mechanization. [This] implies the loss of regulability. As long as a system is a unitary whole, a disturbance will be followed by the attainment of a new [...] state. If, however the system is split up into independent causal chains, regulability disappears. The partial processes will go on irrespective of each other."⁷⁶

Naveh observes that the cognitive tension between the abstract aim and concrete actions exists at every level in the hierarchy. The lower down one comes, or the more specialised the elements

⁷³ Handel, Michael I., *Masters of War*, (London, 2001), 238. According to Handel there is an irony in that "obtaining accurate information on one's own forces is the most challenging aspect" of the observation phase. See also Handel, Michael I., *Intelligence and Military Operations*, (London, 1990), 59

⁷⁴ Naveh, Shimon, *In Pursuit of Military Excellence*, (Oregon, 1997), 5, 17

⁷⁵ Ibid., 5-6. See also Senge, *Den fente disiplin*, 355

are, the more will they identify themselves with their immediate objective and less with the aim of the system as the whole. "Increasing mechanization means increasing determination of elements to functions only dependent on themselves[.]"⁷⁷. A unit's or a soldier's immediate objective becomes increasingly fused with the physical action that must be done to achieve that objective. At the same time a greater distance between the strategic and tactical levels develops. This implies progressive centralisation. According to Naveh, the loss of regulability will for a traditional military system require a hierarchical structured plan. Every step in the planning process becomes dependent upon the hierarchical level above.⁷⁸

Naveh relates these processes to the field of strategy. Strategy requires creative vision and exists primarily in the field of the abstract [i.e. formulation of a future end state]. In contrast, tactics require physical action and are mostly mechanistic. It is held to the requirements of the existing reality. The existence of a "cognitive tension" between strategic abstraction and tactical mechanisation is a dichotomy of perspective. According to Naveh, appreciating this tension is fundamental to understanding the operational level. Because of the tension between the tactical and the strategic, the operational level concerns itself with the "preservation of a controlled disequilibrium between the general aim and the specific missions. Only on this level can the abstract and mechanical extremes be fused into a functional formula."⁷⁹

It appears then that this formula is about the preservation of regulability for one's own forces with the aim of disrupting the regulability in the enemy system. This implies splitting up the enemy system into independent causal chains. The partial processes of the element will then go on irrespective of each other. In other words, the enemy system as a whole is forced towards a mono-stable state with its independent parts fighting unrelated tactical battles.

If we relate this to the concepts of manoeuvre warfare the formula could be expressed as follows:

- The elements, the species and the interaction must be linked to one's own "hub of all power and movement" [i.e. centre of gravity]. The aim is the elimination of the opponent's. It becomes the "conceptual denominator common to all numerous participators of the operational process."⁸⁰

⁷⁶ Bertalanffy, *General System Theory*, 70

⁷⁷ Ibid., 69

⁷⁸ Naveh, *In Pursuit*, 18

⁷⁹ Ibid., 7. Naveh touches upon directive control to a very limited degree.

⁸⁰ Ibid., 15

- The emergent behaviour of the system must be based on its ability to control the disequilibrium between the system's overall aim and the sub-system's objectives. The manoeuvrists use directive control to achieve this.
- The elements and species must have mass and velocity corresponding to the combined arms theory.

In the next section we will investigate how the doctrines and the manoeuvrist authors define and relate to operational art.

3.3 Operational Art and Doctrines

According to the advocates of manoeuvre warfare the traditional western style of warfare has not been an expression of operational art.⁸¹ Rather the style of warfare has been about accumulating tactical victories in order to attain strategic objectives. Battles have been given where and whenever they have been offered. Lind exemplifies operational art as using tactical events to strike directly at the enemy's strategic centre of gravity. "For the commander, it is the art of deciding where and when to fight on the basis of the strategic plan."⁸² Lind illustrates this with an example from the German campaign in France 1940: "Guderian looked beyond his immediate tactical situation to see that a victory against the French to his south meant nothing, while a successful advance to the west meant everything. He linked his tactical to his strategic situation in such a way as to see what future tactical actions he should take. He used the tactical event – the crossing of the Meuse – strategically, and decided what tactical actions to take – where to fight and whether to fight – on a strategic basis."⁸³ We will look more into Guderian's actions below.

There are three main aspects of operational art. The first aspect is about defining the levels of war within a system. Which level, if any, is conducting operational art? The second is how one can define the interface between them. The challenge is the dialectic of thinking that must occur on the operational level in relation to tactics and strategy. But this appears to be a problem because there is a rather indiscriminate use of the term "strategic".⁸⁴ The third, which we have already touched upon, is the how to express and apply the theoretical mechanism into military doctrines.

⁸¹ The 1982 version of FM 100-5 introduced the term operational level. In the 1986 version, the divisions of war included military strategy, operational art and tactics. All the doctrines used in this thesis define the operational level, but not all touch upon operational art.

⁸² Lind, *Maneuver Warfare Handbook*, 24

⁸³ Ibid. 24

⁸⁴ The doctrines refer to six different strategic levels: Grand, national, political, national military, military and just strategic level. There are also operational, theatre, grand tactical, tactical, and technical levels.

3.3.1 Levels and interface

For the purposes of this thesis, the grand strategic level is concerned with the application of national resources, both military and non-military, to achieve policy objectives. According to the doctrines, it is the exclusive province of governments.⁸⁵ The link, so to speak, between the grand strategic and the operational level, is the military strategic level.⁸⁶ At this level, armed forces are deployed and employed within an overreaching political framework and in a synchronised fashion with other non-military initiatives in order to achieve the grand strategic objectives. This level identifies and sets military strategic objectives.⁸⁷ It follows from this that the employment of armed forces through planning, setting of operational objectives and execution of campaigns is addressed at the operational level. According to the European and NATO doctrines, this must contribute directly towards achieving the military strategic objectives.⁸⁸ In the American doctrines, the operational level is concerned with achieving *strategic* objectives. Tactics is the employment of units in combat. It includes the ordered arrangement and maneuver of units in relation to each other, the terrain and the enemy to translate combat power into victorious battles and engagements in order to achieve objectives set at the operational level.⁸⁹

The doctrines express a strong and obvious cognition that the grand strategic level governs the use of military force. Whereas the cognition of this subordination is obvious, the doctrines are vaguer when it comes to the interface and interaction with other non-military means. The descriptions found on operational art resemble more that of Jomini's grand tactics, which "[...] is the art of making good combinations preliminary to battles, as well as during their progress. The guiding principle in tactical combinations, as in those of strategy is to bring the mass of the force in hand against a part of the opposing army, and upon that point the possession of which promises the most important result."⁹⁰

Naveh has a more theoretical view. Strategy and tactics strive, through the calculated investment of resources and optimisation of their employment, to support the politician's intention to produce a new reality. Operational art interprets, through dialectical thinking, the military implications from the political decisions, and initiates future situations that lead to the

⁸⁵ BMD, chapter 4, 7. See also FFOD, 37 and FM 100-5, 6-1.

⁸⁶ The military strategic level is only used in the European doctrines. In the U.S. national military strategy is addressed at the Joint Chief of Staff. See for example Joint Chiefs of Staff, *Joint Warfare of the Armed Forces of the United States*, JP-1, (2000), IV-3. [JP-1]

⁸⁷ NATO, AJP-01(B), *Allied Joint Doctrine*, (2000), 2-1. [AJP-01(B)]

⁸⁸ AJP-01(B), 2-2. See also NATO, AJP-3, *Allied Joint Operations, Ratification Draft*, (2000), 1-3. [AJP-3], FFOD, 36 and BMD, chapter 4, 8

⁸⁹ U.S. Army, Field Manual 3-90, *Tactics*, (2001), 1. [FM 3-90], FM 100-5, 6-3

⁹⁰ Jomini, *The Art of War*, 178. See also 69-70 and FM 100-5, Glossary-6

materialisation of the desired reality.⁹¹ Naveh's interpretation does not pin operational art to a specific military decision level, which seems to be the case in the doctrines. But it is not apparent whether the desired reality extends beyond the effects that are produced on the opponent's armed forces, or if his definition involves the investment or employment of other than pure military means.

However, McCormick takes the view that operational art, in addition to the application of forces in the field, also ties together a nation's ability to generate and field an army. It includes production capacity, working population, natural resources, infrastructure and mobilisation procedures.⁹² Greer takes this further, and proposes that operational art must also be integrated with diplomatic, economic, and informational efforts.⁹³ These views are noteworthy because the perspective is broader than in most doctrines and in the literature.

The distinction between the levels of war and its relationship with operational art is not clear. The views on how operational art should be applied make an even more confusing picture.

3.3.2 The Syncopation Theory

According to Sun Tzu, there are not more than five musical notes, yet the combinations of these give rise to more melodies than can ever be heard.⁹⁴ Depending on one's taste in music of course, the Chinese gives a good metaphor for the area around the "opportunistic" and "chaotic" regions of the bifurcation figure. Each of the melodies could represent a system's stable state.

Lind is of the opinion that the approach to war should, "instead of being an orchestra with a score, [...] be like a jazz group jamming."⁹⁵ He relates this metaphor to the use of directive control. "The German army has used mission-type orders for over a century, yet it has not been an army that was out of control"⁹⁶ Control is replaced with guidance, while the intent and the mission glue the force together. In his view, one does not need detailed orders. Detailed planning and orders are a means to synchronise units. "Concepts that contradict [manoeuvre warfare] – such as "synchronization," [...] must fall out, because the nature of war simply will not admit

⁹¹ Naveh, *In Pursuit*, 306. Liddell Hart, *Strategy*, 366. Grand Strategy is guided by the wish for a new reality; "a better peace".

⁹² McCormick, Michael, The New FM 100-5, A Return to Operational Art, *Military Review*, (September-October 2002, 1997), 11

⁹³ Greer, J. K., Operational Art for the Objective Force, *Military Review*, (September-October 2002), 24

⁹⁴ Tzu, Sun, Bøckman, Harald, trans., *Kunsten å krige*, (Oslo, 1999), 44

⁹⁵ Lind, The Origins of Maneuver Warfare, in Olsen, *From Manoeuvre Warfare*, 29

⁹⁶ Lind, *Maneuver Warfare Handbook*, 14

them. Something that is dominated by surprise, rapid change, and friction cannot be synchronized.”⁹⁷

On the other hand, NATO and the U.S. Army are of the opinion that “[w]hile speed is often preferred, commanders adjust tempo to ensure synchronisation.”⁹⁸ A somewhat less rigid view is also expressed. For example, a “hasty attack occurs in a meeting engagement and is launched with minimum preparation and it [...] enhances agility at the risk of losing synchronization.”⁹⁹ The difference in the approach is also reflected in their views on planning. FM 100-5 states that “commanders conduct detailed initial planning.”¹⁰⁰ This would of course lead to a longer orientation phase. On the other side, the British doctrine states that “[t]he recourse to detailed orders should be the exception.”¹⁰¹ However, the British do not think that there is conflict in this. Accordingly, “[s]ynchronisation is the key to successful offensive operations.”¹⁰² According to AJP-01(B), “[...] to derive the potential synergy for the successful prosecution of joint operations, synchronisation [...] is of paramount importance.”¹⁰³ This doctrine’s view is that potential responses to synchronised manoeuvres can create an agonising dilemma for the adversary. As we have seen from the theory of non-linearity quite the opposite is the case. More synchronisation means fewer available options. Fewer options or states available for a system mean fewer dilemmas for its enemy. But synchronisation is a means for concentration, and theoretically, it contrasts with the idea of presenting the enemy with a dilemma.

The manoeuvrists also mix the term synchronisation with simultaneity. According to Leonhard, “[...] simultaneity is extremely difficult to execute. The amount of planning and supervision over the [...] operations threatens to overtax the friendly commander more than it will the enemy [...] The time to plan such efforts will necessarily add to planning time, hence reducing acceleration and force.”¹⁰⁴

⁹⁷ Lind, *The Theory and Practice of Maneuver Warfare*, in Hooker, *Maneuver Warfare*, 8. There are of course other opinions. See for example: Rippe, Stephen T., *Firepower and Maneuver: The British and the Germans*, *Military Review*, (October, 1985), 32. “The German leaders were masters at the synchronized concentration of combat power.” See also Burton, J. G., *Pushing them out the Back Door*, *Naval Proceedings*, (June 1993), 37-42. During the 1991 Gulf War, General Franks was preoccupied to “[...] align his forces in complex maneuvers to keep them synchronized.” It was “a matter of timing and synchronization.” “[I]nstead of cutting off RG’s escape his carefully synchronized “three divisions first” literally pushed the Republican Guard out of the theater back to Iraq.”

⁹⁸ FM 100-5, 7-3, Tempo is defined as: “[...] the rate of speed of military action; controlling or altering that rate is essential for maintaining the initiative.”, 7-2.

⁹⁹ *Ibid.*, 7-5

¹⁰⁰ *Ibid.*, 7-1

¹⁰¹ BMD, Annex B, 3

¹⁰² British Ministry of Defence, Chief of the General Staff, *Army Doctrinal Publication Volume 1, Operations*, (1994), sections 0441, 0434. [ADP]

¹⁰³ AJP-01(B), 4-9

¹⁰⁴ Leonhard, *The Art of Maneuver*, 175

What seems to be the case is a totally different perspective with regard to the levels of war and the time-space relationship. The issue in this debate is not whether one should be “jamming”, or letting musicians without any sense of rhythm play under the supervision of a rigid conductor. The conductor’s role in every orchestra is to put his interpretation of the piece of music into the plan of the composer. He is so to speak the “input” to the musicians. He lets the individual musician, or a group within the orchestra, know when to play pianissimo or fortissimo and when to make notes longer or shorter than they appear on the paper.

First, the jazz metaphor seems to express a view contrary to the standards of modern *Innere Führung*. Jamming is about musicians who during the course of their performance find supreme fulfilment of one’s self in being more virtuous than the preceding solo-player. They joyfully live off and nourish their creativity by their colleagues’ performance. Initially this does not seem to have anything to do with the issue. But in contrast to the creativity of jazz, war lives off and nourishes itself from destruction. A dilemma therefore arises. How much control is necessary to achieve the overall aim, and at the same time limit the “destructive creativity” of those trying to achieve the objectives? According to the general system theory, jazz jamming would express progressive segregation with the consequence of loss of regulability. Positive segregation also means that there is an increasing determination on part of the elements to function entirely independent of others.¹⁰⁵ The musicians [i.e. soldiers] are likely, in Geyer’s words, to show a more machine-oriented behaviour, optimising their immediate objective of destruction.¹⁰⁶ If operational art is about more than Jominian grand tactics, the disequilibrium is the contrast between the desire for a better peace and the objectives of destruction. This implies controlled aggression. Does Grossman’s view that *Auftragstaktik* empowers aggressive behaviour from subordinates by increasing the leader’s demands for killing behaviour enhance the possibility for a better peace?¹⁰⁷

A different perspective is to look upon war and operational art as an orchestra playing Tchaikowsky’s “1812” overture.¹⁰⁸ Another term from the world of music could then be introduced: syncopate. Simpkin expresses the notion behind syncopate and its relation to simultaneity. “The common factor is not chronometric time but the time needed to complete the [OODA-loop]. The Russians evidently regard two actions as exerting simultaneous pressure if

¹⁰⁵ Bertalanffy, *General System Theory*, 69

¹⁰⁶ Geyer, Michael, German Strategy in the Age of Machine Warfare, in Paret, *Makers*, 543

¹⁰⁷ Grossman, David A., Defeating the Enemy’s Will, The Psychological Foundations of Maneuver Warfare, in Hooker, *Maneuver Warfare*, 178

¹⁰⁸ The use of the term “orchestration” is used by some doctrines. See for example AJP-3, 3-4, and ADP, section 0318

one follows the other within the enemy's response time at the level affected."¹⁰⁹ According to Naveh, "[t]he simultaneous operation along the rival system's entire depth [brought] forth the principle of initiative, which in its turn illuminated the operational idea of synergy or synergy deprivation by means of fragmentation. And finally, the combinations of various operational elements, manoeuvring simultaneously along different fields of time and space, emphasised both the principle of momentum and the need for synchronisation."¹¹⁰

Leonhard's most serious objection to Naveh's and Simpkin's view is that it violates one of the most important principles of manoeuvre theory, which is attacking weakness instead of strength. "By simultaneously attacking all elements of an enemy formation, we are ignoring the opportunity to find gaps and avoid surfaces. In essence we are attacking both gaps and surfaces, losing the potential disruption effect that would follow an attack on the center of gravity and opting instead for mass destruction of the entire unit."¹¹¹

3.4 Conclusion

At this stage it is possible to identify three different schools of thought regarding operational art. One group pursues an increased systemic mechanisation with the aim of a more effective "killing behaviour". Its focus is primarily tactical. Naveh and Simpkin, who represent a second group, relate to the time-distance relationship differently from that of Boyd's dogfight or Leonhard's tank battalion.¹¹² The second group has views that wish to use the right degree of control on the right mix of forces. This requires an understanding of the internal interaction in one's own system and how it interacts with an opposing system in a time-space relationship. That does not necessarily include the mass destruction of entire units. What Simpkin and Naveh propose is to create a systemic shock, which is the deliberate creation of vulnerabilities. But this group has a Jominian approach. They are more concerned with the military aspects of achieving military strategic aims, without recognising the link between the grand strategic goals and military conduct. A third group sees the systemic implications of strategy and relates the art to the use of

¹⁰⁹ Simpkin, *Race to the Swift*, 148

¹¹⁰ Naveh, *In Pursuit*, 271

¹¹¹ Leonhard, *The Art of Maneuver*, 176

¹¹² Hamilton, Mark R., *Maneuver Warfare—And All That*, *Military Review* (January, 1987), 10. The OODA-loop is also called the "Decision-cycle. This is different from a military units order cycle. The order cycle is how long it takes from when the commander receives a mission, gives guidance, staffs the situation, writes the order (decision) and distributes it. For a brigade this cycle takes about 12 hours, for a division 24 hours and for a corps it takes 72 hours. An air tasking order is normally prepared 24-hours in advance. See also Bateman Robert L., *Avoiding Information Overload*, *Military Review* (July-August, 1998), 55. Bateman is of the opinion that the OODA-loop must be restructured to be a cycle of ODOA (Observe, Decide, Orient, Act). The reason is the time consumption during the order cycle. He fuses the "Observation" and original "Orientation" phases. The new "Orient" phase is when the unit prepares and deploys according to new orders. This will then constitute an "Order Cycle", within the "Decision Cycle".

all the state's assets to achieve the grand strategic aim. The interface between the military and civilian command level is somewhat obscured, but it seems that this concerns the relationship between the military strategic level and other state agencies. That is, according to the Norwegian Joint Operational Doctrine (FFOD), manoeuvre theory as opposed to just manoeuvre warfare. FFOD claims that manoeuvre warfare in the past was a part of the theories of war. Currently it is a part of manoeuvre theory. A state can manoeuvre with all its assets in order to achieve its objectives.¹¹³ However, that is not what Simpkin meant with manoeuvre theory.

The debate is splitting hairs. Nevertheless, it shows a fundamental difference in perspective and opinion on what is supposed to be one theory. The debate is not new either as Beaumont notes: "[S]ome German officers were [...] concerned about the dysphasia that had appeared when microbattles fought by lower level commanders under the principle of [*S*]elbstandigkeit [...] warped operations out of alignment with the intent of higher commanders [...]. Some of those Prussian military theorists anticipated the dilemma that unhinged von Schlieffen's grand maneuver scheme in 1914 as they grappled with the tension between "ground truth" and "the big picture". They formulated a "Law of the Situation", but did not resolve the basic quandary, nor could they foresee either the scale or the ramifications of the impending extension of combat in time, space and velocity on land, at sea, and in the air."¹¹⁴ Leonhard is perhaps close to the essence of the matter when he states: "You can employ mission tactics and yet not fight maneuver warfare. Conversely, you can fight according to maneuver warfare principles and yet not use mission tactics. Mission tactics simply describes a way in which we converse and make decisions on the battlefield; it does not imply a method for fighting."¹¹⁵

It appears however, that the elaboration of operational art, especially the theoretical views presented by Naveh, gives meaning to the rather misused terminology surrounding command and control, or perhaps one should use C^{nth} I^{nth} xyz.¹¹⁶ The military principle of, for example, centralised command and decentralised execution, adopted by many air forces, is superfluous because it just describes how any system works. Both the Commander of the Air Force and any squadron leader are commanders. The issue is on what level different arms and types of units should organically belong. Is the artillery a corps or a division level asset? The most practical way of organising cannot be decided unless one can determine what type of war is to be fought

¹¹³ FFOD, 49

¹¹⁴ Beaumont, Roger, *War, Chaos, and History*, (London, 1994), 9

¹¹⁵ Leonhard, Richard, *Fighting by the Minutes*, (Novato, 1994), 112

¹¹⁶ For more on C^{nth} I^{nth} xyz, see for example Liepman, James M, C^{nth} I^{nth} xyz, TACS, and Air Battle Management, *The Search for Operational Doctrine*, *Air Power Journal*, (Spring, 1999)

and who the enemy is.¹¹⁷ Nevertheless, it is the command levels *raison d'être* to preserve regulability and to keep the system as a whole intact in its positive progress towards a new state. The system's parts pursue efficiency in achieving the objectives that are needed for a change of state for the whole system. Operational art is about balancing the creative tension between the command and execution levels on a sliding scale of centralisation.

The next issue is which target should be hit. According to the British doctrine, "[i]dentification of the point against which to concentrate effort so that it will have the greatest effect upon an enemy's force, whilst sustaining minimum loss, is a major component of operational art. [...] This is known as the Centre of Gravity."¹¹⁸

4 Centre of Gravity

The key to unlocking the logic of manoeuvre theory may be found in the term centre of gravity. Clausewitz defined the term as: "Out of these characteristics a certain centre of gravity develops, the hub of all power and movement, on which everything depends. That is the point against which all our energies should be directed."¹¹⁹ This definition is now found in every manoeuvre warfare doctrine. According to one doctrine, the definition has not changed substantially since Clausewitz introduced it.¹²⁰

How does one relate to a centre of gravity, and how is it related to theories and terms used in manoeuvre warfare? Are there several centres of gravity? May a centre of gravity change? Are there centres of gravity on each level of war? Is it strong or is it weak? Is it possible to locate it?

According to Greer, "[t]he U.S. Marine Corps is examining an innovative doctrinal approach that seek to translate the theoretical construct of the center of gravity into a practical approach to applying combat power. This approach is to find the critical vulnerabilities of an opposing force - those that will cause its center of gravity to fail - then attack and defeat critical vulnerabilities."¹²¹ Is there a theoretical construct that no one has been able to put into practice since the early 19th century? We will use the Clausewitzian definition to investigate the doctrines and literature in order to find some answers to what it is and how one should relate to it.

¹¹⁷ For other ideas, see for example *Warfighting*, 89, which uses "decentralized command and control", or FM 100-5, 2-6, "Decentralized decision authority".

¹¹⁸ BMD, 46. See also FM 100-5, 6-7 and JP-1, V-3. "A central consideration in applying the operational art is the location and nature of adversary centers of gravity [...]."

¹¹⁹ Clausewitz, *On War*, 595-596

¹²⁰ NDLO, 21

¹²¹ Greer, *Operational Art*, 26

4.1 The "Bull's Eye"

Leonhard notes that "[a]lthough the term center of gravity has become popular in the U.S. Army, I have rarely found a field manual that tells me what one looks like, so that I could aim my rifle at it."¹²² John Warden, a former colonel in the U.S. Air Force may provide Leonhard with a bull's eye.

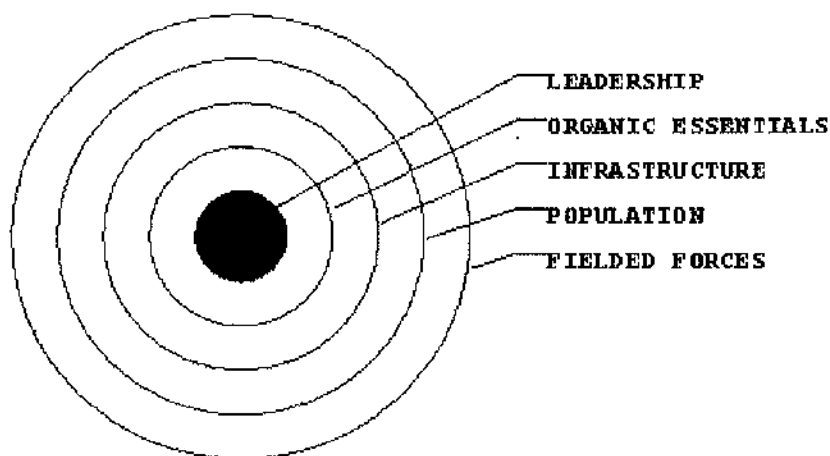


Figure 3: Warden's five-ring model

Before the air campaign in the 1991 Gulf War, Warden presented a conceptual tool for choosing targets. He presented the enemy as a system by using rings. There were five elements; organic essentials; infrastructure; population; field forces; and leadership. The last is the bulls-eye.¹²³

According to Warden, each of the elements is a centre of gravity. By analysing the structure within each ring one can differentiate sub-structures and a new layer of centres of gravity occurs. By further differentiation one finds specific targets that it is important to eliminate. Earlier, due to less precise weapons, it was necessary to attack enemy targets in sequence. For example the allied bomber force changed the target systems to be hit before the invasion of Normandy in 1944. It shifted from bombing industry in Germany to bombing targets that would facilitate the allied ground forces' operations in northern France. Forces had to be concentrated on one set or one type of targets in order to achieve a breakthrough or a desired effect. The problem with serial bombing was that the enemy could learn from experience. The serial bombing was in this respect a rather mono-stable strategy. Thus the Germans moved their factories to less exposed locations

¹²² Leonhard, *The Art of Maneuver*, 20

¹²³ Warden, John A., *The Enemy as a System*, *Air Power Journal*, (spring 1995), 45

after a period of bombing. During the Gulf War in 1991, one assumed that, by carefully picking out targets within each of the five rings and attacking them simultaneously, one could paralyse the enemy in a more efficient way. One could hit the enemy targets in a combination and within a timeframe that made the coherence between the elements disappear. Thus, the allies achieved a synergistic effect, as the result of the bombing became greater than the sum of each bomb put together. The system as a whole was put in a state of shock through “parallel attack”.¹²⁴ Warden expresses a systemic approach similar to the idea of syncopation. The challenge is that the number of centres of gravity is equal to the number of identified targets.

4.1.1 The plurality of the centre of gravity

According to the United States Navy there can only be one centre of gravity.¹²⁵ This contrasts with FM 100-5, which says that a centre of gravity exists at the strategic, operational and tactical levels. In other words, there are several of them.¹²⁶ What did the “inventor” of the term, Clausewitz, mean?

According to the author of *On War*, there could be a number of centres of gravity. He wrote for example that: “Still no matter what the central feature of the enemy’s power may be - the point on which your efforts must converge – the defeat and destruction of his fighting force remains the best way to begin.”¹²⁷ He then ranks what he considers to be the most important centres of gravity. They were the enemy army, his capital, and the enemy’s principal ally.

He also emphasised that “[t]he first principle is that the ultimate substance of enemy strength must be traced back to the fewest possible sources and ideally one.”¹²⁸ Clausewitz stated that when it was not realistic to reduce it to one, there was “no alternative but to act as if there were two wars or even more, each with its own object [i.e. centre of gravity].”¹²⁹

Except for the U.S. Navy’s categorical claim that there is only one centre of gravity, quite the opposite is the case for the other doctrines.¹³⁰ The difference between the doctrines becomes still more obscure when the term is related to the levels of war.

¹²⁴ Ibid., 54

¹²⁵ U.S. Navy, *Naval Doctrine Publication 1, Naval Warfare*, (1994), chapter 3

¹²⁶ FM 100-5, 6-7

¹²⁷ Clausewitz, *On War*, 596

¹²⁸ Ibid., 617. Howard and Paret have substituted the term “*Schwerpunkte*” with the term “sources”. See Clausewitz, Carl von, *Vom Kriege-Hinterlassenes Werk des General Carl von Clausewitz*, Dritter Band, (Berlin, 1834), 161.

“Das erste ist: das Gewicht der feindlichen Macht auf so wenige Schwerpunkte als möglich zurückzuführen.”

¹²⁹ Ibid., 597. See also 619.

¹³⁰ *Warfighting*, 47. It appears that *Warfighting* is the only doctrine that recommends reducing the number of centres of gravity.

4.1.2 Centres of Gravity and levels of war

The British Military Doctrine states that the centre of gravity is not used at the tactical level of war.¹³¹ As seen above, this is opposed to what is stated in FM 100-5. The U.S. Army's view is also supported by NATO's AJP-01(B), but AJP-3 states that "it is probably less appropriate tool for use at the tactical level."¹³² The other doctrines do not touch upon levels. But as they use the term in the plural, one may assume that it could be used at several levels of war.

The fact that Clausewitz preferred to reduce the number of centres to one indicates that it should be found at the strategic level. This notion is reinforced as Clausewitz related the centre of gravity to nations and alliances. However, when Clausewitz looked upon the destruction of the enemy army as the primary target, the centre of gravity was on what we today would call the operational level. "Combat is the only effective force in war; its aim is to destroy the enemy's force as a means to a further end."¹³³ As Handel points out, the author of *On War* did not write a book on diplomacy. "Therefore the other means by which conflicts can be won are not within the scope of his discussion."¹³⁴

But manoeuvre warfare also finds inspiration from Sun Tzu. Although he did not use the Newtonian concept, his writings give a clue as to what he thought was the most important element to attack. For the Chinese philosopher it was of supreme importance to attack the enemy's strategy.¹³⁵ Attacking the enemy army was of secondary importance. Sun Tzu identified centres of gravity primarily on the highest political and strategic levels. However, both Clausewitz and Sun Tzu claimed that, if the centre of gravity was correctly identified, victory could be achieved more efficiently at a lower cost. As they contradict each other with regard to what was the most important to eliminate, this might have caused some confusion among the manoeuvrists. As Sun Tzu obviously wanted to avoid attacking the enemy mass, he seems to be more in line with modern manoeuvre warfare than Clausewitz is.

The investigation into doctrines shows fundamental differences on the plurality of the term and the level at which the concept is applicable. In 1999, General Short believed it to be the president of Serbia, whereas SACEUR believed it to be the Serbian 3rd Army in Kosovo.¹³⁶ A further investigation into the concept and how one relates to it may give some more concrete answers.

¹³¹ BMD, annex C, 6

¹³² AJP-01(B), 3-3, AJP-3, 3-7

¹³³ Clausewitz, *On War*, 97

¹³⁴ Handel, *Masters of War*, 59

¹³⁵ Sun Tzu, *Kunsten & krige*, 33

¹³⁶ Short, An Airman's Lesson, in Olsen, *From Manoeuvre Warfare*, 261

4.2 Attacking the centre of gravity

In one NATO publication the centre of gravity is defined as the hub of all power and movement on which everything depends, or the point against which all energies should be directed. In the original definition, the centre of gravity is the point against which all our energies should be directed.¹³⁷ Most of the doctrines have excluded this sentence.¹³⁸ This could indicate that the prevailing thought is that one could direct all energies against something other than a centre of gravity.¹³⁹

Richard Leonhard supports the U.S. Marine Corps' 1989 doctrinal view and says there is a danger in using the term. He then refers to Clausewitz: "A center of gravity is always found where the mass is concentrated the most densely. It presents the most effective target for a blow; furthermore, the heaviest blow is that struck by the center of gravity."¹⁴⁰ "Clearly, Clausewitz was advocating a climactic test of strength against strength [...] This approach is consistent with Clausewitz's historical perspective. But we have since come to prefer pitting strength against weakness. Applying the term to modern warfare, we must make it clear that by the enemy's center of gravity we do not mean a source of strength, but rather a critical vulnerability."¹⁴¹

The U.S. Marine Corps developed its cognition of the centre of gravity in its 1997 edition of *Warfighting*. It is now not a critical vulnerability, but critical vulnerabilities within the centre of gravity. It is the critical vulnerabilities of the enemy that should be hit. But the doctrine also opts for hitting smaller centres of gravity at the same time. According to *Warfighting*, centres of gravity and critical vulnerabilities are complementary and success in war depends on the ability to direct our efforts against them.¹⁴²

According to the Norwegian Doctrine for Land Operations (NDLO) it is possible to influence a centre of gravity indirectly through one or several decisive points. The decisive points in turn can be attacked indirectly through one or more critical vulnerabilities.¹⁴³ This means that the critical vulnerabilities are to be found, not in the centre of gravity as in the USMC doctrine, but in relation to the decisive points. The USMC does not use the term decisive point, but rather uses the terms critical vulnerabilities or smaller centres of gravity.

¹³⁷ Clausewitz, *On War*, 596

¹³⁸ NDLO, 21. This is the only doctrine to include the sentence.

¹³⁹ FM 100-5, 6-7

¹⁴⁰ Clausewitz, *On war*, 485

¹⁴¹ Leonhard, *The Art of Maneuver*, 21

¹⁴² *Warfighting*, 46-49

¹⁴³ NDLO, 21-22

In FFOD decisive points are named vital points. They are part of one or several centres of gravity and are abstract, physical or variable.¹⁴⁴ The doctrine explains that Jomini introduced vital points and that he differed between vital points of manoeuvre and vital geographic points. However, that is not actually what Jomini wrote. He introduced two classes of points. One class was "objective points". The other class was "decisive strategic points". Of the first class there were objective points of manoeuvre and geographical objective points. "In strategy, the object of the campaign determines the objective point. If this aim be offensive the point will be the possession of the hostile capital or that of a province whose loss would compel the enemy to make peace."¹⁴⁵ Next, he thought that "the name of decisive strategic point should be given to all those which are capable of exercising a marked influence either upon the result of the campaign or upon a single enterprise."¹⁴⁶ In this class of points there were "accidental points of maneuver" and "decisive geographic points." Also in this class of points the possession of the enemy capital was important. Both of Jomini's classes of points are then similar to Clausewitz's second most important centre of gravity. Is a centre of gravity then a decisive point?

According to FM 100-5 "[d]ecisive points provide commanders with a marked advantage over the enemy and greatly influence the outcome of an action [...]. Decisive points are not centres of gravity; they are the keys to getting at centres of gravity."¹⁴⁷ However, FM 100-5 prescribes that, during planning, all potential decisive points must be analysed in order to find out which of them makes it possible to attack the enemy centre of gravity. Those potential decisive points are allocated resources. They are then designated as objectives.¹⁴⁸ One may assume that an objective is similar to what the British Doctrine calls a point of weakness. Accordingly, "[...] manoeuvre depends for success on the application of force against identified points of weakness – concentration of force at a decisive point."¹⁴⁹

While FM 100-5 seems to regard decisive points or objectives as entirely physical, the Nato doctrines have a broader view. According to AJP-3 a decisive point is a point that may exist in time, space or in the information sphere. It is the co-ordinated activity and its effect on the enemy, regardless of battle, physical encounter and geographical dependence, that determines whether it is a decisive point or not.¹⁵⁰ The term decisive point is also used in AJP-01(B). But here also the term "critical decisive point" is introduced. This is related to a more direct approach

¹⁴⁴ FFOD, 60

¹⁴⁵ Jomini, *The Art of War*, 88

¹⁴⁶ *Ibid.*, 86

¹⁴⁷ FM 100-5, 6-7 and 6-8

¹⁴⁸ *Ibid.*, 6-8

¹⁴⁹ BMD, annex C, 8

to the centre of gravity."The direct approach involves a linear, uninterrupted approach against an opposing force's [centre of gravity] often by the way of critical decisive points."¹⁵¹

At this stage it is necessary to give a short résumé of the findings. At least Jomini's objective points seem to have similarities with Clausewitz's centre of gravity. One proponent of manoeuvre warfare is of the opinion that the centre of gravity is a critical vulnerability. Another tells us that it is either a weakness or strength. According to the doctrines one or more centres of gravity on all levels of war may be attacked directly, but preferably indirectly, through abstract, variable or physical:

- (1) critical vulnerabilities within the centres of gravity,
- (2) smaller centres of gravity within a larger centre of gravity
- (3) critical vulnerabilities in decisive points,
- (4) vital points which are part of a centre of gravity
- (5) objectives which are the most important decisive points,
- (6) points of weakness which are the same as decisive points,
- (7) critical decisive points.

In 1988, Colonel Warden determined that Soviet depot fuel manifolds were centres of gravity.¹⁵² In both the last wars against Iraq, Saddam Hussein was seen as the "hub of all power and movement". When the manoeuvrists introduce the original German term, *Schwerpunkt*, they can perhaps square the circle.

4.2.1 When the *Schwerpunkt* attacks the centre of gravity

William Lind was one of the civilian reformers in the American defence establishment during the period of doctrinal change within the U.S. Army. According to Naveh, Lind provided the uniformed reformers with the keys to develop an advanced conceptual substitution for the traditional paradigm of tactical attrition. Moreover, by introducing new operational ideas and terminology, "[he] provided the military reform circle [...] with conceptual and linguistic patterns that could serve as a basis for a new professional cognition."¹⁵³

¹⁵⁰ AJP-3, 3-7

¹⁵¹ AJP-01(B), 3-4

¹⁵² Olsen, John, A., *Operation Desert Storm*, (London, 2000), 100

¹⁵³ Naveh, *In Pursuit*, 262

One of the terms Lind introduced was the term "*Schwerpunkt*". However, "*Schwerpunkt*" was not translated into "centre of gravity", but "focus of effort". Lind reminds us that it is dangerous to translate it as "point of main effort", while it is not a point on the map. "*Schwerpunkt* is not just the main attack [...]. It is a conceptual focus, not just a physical one. All commanders refer to the *Schwerpunkt*, along with their superior's intent and the mission, in making their own decisions. Each makes sure his action supports the *Schwerpunkt*."¹⁵⁴

Schwerpunkt then becomes a dynamic and harmonising direction of force represented through the unit designated with the main mission. *Schwerpunkt* obtains mass through the support contributed by other units. Lind develops the term by introducing surfaces and gaps. Surfaces represent the enemy strength, and gaps are less strong parts of, for example, a front line. Through the method of reconnaissance pull, where the reconnaissance units are leading the direction, this unit pulls the *Schwerpunkt* through the gaps. This is essential in the theory where one is supposed to avoid the enemy strength. Lind continues his definition. When a gap is found or created this will be the breakthrough point where the force is pulled through. Part of the force is used to suppress the enemy by massive firepower and widen the gap. The rest of the force progresses into the rear area of the enemy sector and makes him collapse. The decisive point then seems to be the gap, or what creates a gap - penetration.

The inspiration from Lind is clearly seen in some of the doctrines. According to USMC's *Warfighting*, there will always be one activity that is more important than any other during an operation. This activity is dedicated to a specific unit as a mission. According to the doctrine the dedicated unit then represents the main effort. All other units within the command will support the main effort.¹⁵⁵ The U.S. Army has cognition of the dynamism as it opts for a change of main effort to another supportive attack if this reveals itself as more beneficial. In the U.S. Army, "[c]ommanders designate a point of main effort and focus resources to support it."¹⁵⁶ It is then slightly less important than a decisive point, which includes massing the "effects of overwhelming combat power at the decisive place and time."¹⁵⁷ Does this mean that a main effort could be directed at less important "points"?

¹⁵⁴ Lind, *Maneuver Warfare Handbook*, 18-19. See also Citino, Robert M., *The Path to Blitzkrieg*, (Colorado, 1999), 243. According to Citino, *Schwerpunkt* is the same as a decisive point.

¹⁵⁵ *Warfighting*, 90-91

¹⁵⁶ FM 100-5, 7-2. A similar definition is given in ADP, sections 0314-0315

¹⁵⁷ *Ibid.*, 2-4

The Norwegian army concentrates forces in a manner that achieves the desired end-state. The desired end-state is achieved through successful operations on decisive points.¹⁵⁸ However, the focus of effort could be on either shaping or decisive operations. The decisive operations are what bring a desired end state, while the shaping operations will only create windows of opportunity. The doctrine explains that the end-state of a shaping operation is the departure point for the decisive operation.¹⁵⁹

In the NATO doctrines, only AJP-3 defines the term main effort. It is the concentration of forces or means in a particular area, where a commander seeks to bring about a decision. "[It] provides a focus for the activity that the commander considers crucial to success."¹⁶⁰ FFOD takes another view. "The manoeuvre elements must be deployed in a manner that ensures a co-ordinated concentration of force in time and space against chosen *centres of gravity* or vital points."¹⁶¹

We can provide Leonhard with many targets he can aim his rifle at. But he may also, as one of the critics of manoeuvre warfare put it, be "hitting 'em where they ain't."¹⁶² Maybe a passage from Lind's manoeuvre warfare handbook sums up how Newton's theory is applied. "[...] the secret of the Panzers' success: they [i. e. the *Schwerpunkt*] struck directly at an enemy's strategic *centre of gravity*, such as the juncture of the French armies in Belgium with those in France itself."¹⁶³ This could give the Bundeswehr some linguistic challenges when relating to doctrines written in English.¹⁶⁴ Is the modern cognition the centre of gravity at odds with the *Schwerpunkt*?

4.3 Centre of Gravity of Centre of Confusion

One source of the confusion could be found in the definition common for most of the doctrines.

*"The Centre of Gravity is that characteristic, capability, or locality from which a military force, nation or alliance derives its freedom of action, physical strength or will to fight."*¹⁶⁵

¹⁵⁸ NDLO, 25

¹⁵⁹ Ibid., 20

¹⁶⁰ AJP-3, 3-7

¹⁶¹ FFOD, 68

¹⁶² Bolger, Daniel P., *Maneuver Warfare Reconsidered*, in Hooker, *Maneuver Warfare*, 29

¹⁶³ Lind, *Maneuver Warfare Handbook*, 33

¹⁶⁴ Bundesministerium der Verteidigung, HDv 100/900 VSNfD, *Führungsbegriffe*, (Bonn, 1990). Commanders should "build up" points of main decision (*Schwerpunktbildung*) within their areas of responsibility. When appropriate, a commander should designate a point of main decision for his subordinate commanders. A change in the situation requires a shift in the point of main decision (*Schwerpunktverlegung*). Other related terms include "area of the point of main decision" (*Schwerpunkttraum*), "point of main decision in an attack" (*Schwerpunkt des Angriffs*), etc.

¹⁶⁵ See for example AJP-01(B), 3-3, AJP-3, 3-7, FM 100-5, 6-7. However, the BMD, chapter 4, 11, differs from the other doctrines in that it states that the centre of gravity could consist of any characteristic, capability or locality. It is then more in accordance with the original definition.

This is an alteration of the Clausewitzian definition. Whereas he induced characteristics into a “*Schwerpunkt*”, the modern doctrines deduce it. What the translation of *Vom Kriege* said was: “[o]ne must keep the dominant characteristics of both belligerents in mind. Out of these characteristics a certain center of gravity develops, [...]”.¹⁶⁶ As will be seen below, this sentence includes something with wider consequences. However, Dr Strange of the Marine Corps University has worked on the definition:

*“A center of gravity are [...] the moral, political and physical entities which possess certain characteristics and capabilities, or benefit from a given location/terrain.”*¹⁶⁷

Strange proposes the following to clarify what a centre of gravity is:

“Centers of Gravity: Primary sources of moral or physical strength, power and resistance.

Critical Capabilities: Primary abilities which merit a Center of Gravity to be identified as such in the context of a given scenario, situation or mission.

Critical requirements: Essential conditions, resources and means for a critical capability to be fully operative.

Critical vulnerabilities: Critical requirements or components thereof which are deficient, or vulnerable to neutralization, interdiction or attack (moral/physical harm) in a manner achieving decisive results.”¹⁶⁸

From the above clarification one sees that

- (1) decisive points (if this is the common word to use) occur when one through
- (2) critical vulnerabilities influences the
- (3) critical requirements in such a way that one prevents the
- (4) critical capabilities from being fully operative.

By this mode of operation one influences the centre of gravity indirectly. Clausewitz wrote that “[i]n war as in the world of inanimate matter the effect produced on a center of gravity, is determined and limited by the cohesion of the parts.”¹⁶⁹ This implies that Clausewitz had a

¹⁶⁶ Clausewitz, *On War*, 595. See also Clausewitz, *Vom Kriege*, Dritter Band, 122-123. “Es kommt darauf an die vorherrschend Verhältnisse beider Staaten im Auge zu haben, Aus ihnen wird sich ein gewisser Schwerpunkt.”

¹⁶⁷ Strange, Joe, *Centers of Gravity & Critical vulnerabilities*, (Virginia, 1996), 48

¹⁶⁸ Ibid., 43

¹⁶⁹ Clausewitz, *On War*, 486. Mallin, Jay, *Strategy for Conquest—Communist Documents on Guerrilla Warfare*, (Florida, 1970). Some guerrilla strategies aim at achieving strength so as to fight the enemy in a more conventional manner. Once they start to fight conventionally, they expose structural vulnerabilities.

systemic approach upon the centre of gravity. It consisted of interdependent parts, and was not fuel manifolds or dictators per se.

4.4 Conclusion

A system's hierarchical structure and columnar mode of actions are an *essential condition* and a critical requirement in order to harmonise an organisation towards its aim. Theoretically, by dividing the directing part from the body that executes the physical actions (mass), one separates a centre of gravity from its *primary ability*. The *critical capability* of steering itself towards the aim is impeded. In order to achieve this in a coherent hierarchical enemy system, the division should be directed as deep into the system as possible. As an illustration, one can picture the bottom of the triangular hierarchy as made up of the primary mass. In order to reach into the softer parts of the triangle (where the directing bodies and support elements are) one has to penetrate, or bypass the mass constituting the lower echelons [i.e. operate on interior and exterior lines]. The aim is to reduce the opposing system's synergy. One separates units and formations, and impedes the co-operation between them both horizontally and laterally. The elements of the enemy system will find themselves fighting for the immediate objective.¹⁷⁰ The enemy is then in a state of systemic shock. In other words, the enemy will fight unrelated tactical battles in a linear and rather mono-stable mindset.

A systemic shock should be created deliberately, and implies a proper balance between offence and a defensive posture. This requires synchronisation, which seeks to produce effects within an enemy system, corresponding to the attributes of an array of forces, both simultaneously and sequentially. Disintegration and erosion is achieved through the simultaneous pressure within the enemy's response time at the level affected. This is exactly how Warden illustrates what he calls parallel attacks on selected targets within the 5-ring model. Although Warden's model is simple, it is holistic in its approach. It illustrates the importance of joint operations, where the elements represented by different arms, express different mass, velocities and range. As it also contains elements and interactions that are not confined to the military sphere, he illustrates the importance of using other instruments of state power. The challenge with Warden's model is of course the inflation of centres of gravity. This could be overcome by combining the model with the terminology proposed by Strange.

The notion of deep parallel attacks is reflected in some of the doctrines, most notably in FM 100-5. However, in other doctrines, the purpose attacks are just deep penetration, and this seems to

¹⁷⁰ Naveh, *In Pursuit*, 17. Naveh proposes a similar view, although he rejects the use of the term centre of gravity.

have become an end in itself. That has led to doctrines that give considerable attention to the offensive and pre-emptive attacks, at the expense of a balance between offence and defence.¹⁷¹ With inspiration from what appears to be the *Maneuver Warfare Handbook's* bottom-up approach, it implies that fighting will be conducted in the same manner as an enemy in systemic shock. This may work against an enemy stuck with a Maginot-line approach. However, manoeuvre warfare was originally founded on the anticipation of major or total war with a numerically superior enemy attacking with several echelons. The manoeuvrists appear not to have distilled how the Wehrmacht applied its form of manoeuvre warfare against the Russians in the latter part of WW II.

Does equipping ourselves with what Schanhorst saw as ambiguous terms, principles and concepts that do not clarify the links between the whole war and its parts enhance the probability of winning wars? The problem with Clausewitz's work is all the contradictions. Clausewitz himself was dissatisfied with it and claimed that he intended to rewrite it entirely. It does not enhance clarity by mixing a term that perhaps was not even clear to Clausewitz, with Jomini's terminology and Sun Tzu's thoughts. Much of Clausewitz's and Jomini's logic rested on the assumption that the enemy army was the most important to destroy, which contradicts Sun Tzu. According to FM 100-5, "[t]he ultimate military purpose of war is the destruction of the enemy's armed forces and will to fight."¹⁷² This is something not every manoeuvrist would agree to.

The centre of gravity could be a battle, an army, a capital, a nation or an alliance. The term is used for all levels of war and in singular and plural. It has produced some second thoughts on the laws of physics. It has led military commanders to believe it could be everything from fuel manifolds to dictators. One might conclude that the application of the term, at least when used in a joint and combined setting, confuses rather than clarifies. Perhaps most important, the interpretation of Clausewitz by those who spoke his mother tongue developed their own cognition of the centre of gravity in their approach to war. As this approach is the inspiration for the manoeuvrists, the next chapter will start out with the centre of gravity and see how the Germans seem to have interpreted the concept.

¹⁷¹ Condell, Bruce, Zabecki, David, T., *On the German Art of War, Truppenführung*, (Colorado, 2001), 284. The manoeuvrists claim that the attritionists lack offensive spirit. In relation to this Wehrmacht General Halder's comment with regards to the 1949 version of the FM 100-5 is noteworthy. "A conspicuous feature of the manual is its overrating of the offensive as a form of combat, even in situations where this does not appear wholly justified." The offensive spirit is significantly more emphasised in contemporary doctrines than it was at the time Halder made his comments.

¹⁷² FM 100-5, 2-4

5 The German approach

The confusion surrounding the term makes it appropriate to return to the question as to why the centre of gravity is important. Why do we want to protect our own, and why do we want to attack the enemy's centre of gravity? "Which, if eliminated will bend him most quickly to our will?"¹⁷³

5.1 Schwerpunkt

It is the enemy centre of gravity that threatens the achievement of our own aim. It is our own centre of gravity that prevents the enemy from achieving his aim. Clausewitz wrote that the defence is the stronger form of war, but with a negative object. [i.e. preventing the enemy achieving his aim] The offensive is the weaker form of war, but with a positive purpose. [i.e. the attainment of one's own aim]¹⁷⁴ But according to Clausewitz there is no true polarity between attack and defence. The true polarity lies in "*the object both seek to achieve: the decision.*"¹⁷⁵ What Clausewitz seems to have meant with his induction was that it was the merging of dominant characteristics from both belligerents that constitutes the Centre of Gravity. "[S]ince the essence of war is fighting, and since that battle is the fight of the main force, the battle must always be considered as the true center of gravity of the war."¹⁷⁶ This implies that the object, the decision, is the battle. He confirms these thoughts in his statement; "[...] to impose our will on the enemy is its [i.e., war's] object. To secure that object we must render the enemy powerless; and that, in theory, is the true aim of warfare. That aim takes the place of the object, discarding it as something not actually part of war itself."¹⁷⁷ According to Naveh, Clausewitz was subjecting the essence of warfare to the mechanical logic of the duel. He assumed that the operational manoeuvre was nothing other than a collision between two strategic masses – one defending and the other attacking. The positive object of destruction then guides the attack. Accordingly, the attacker should always assemble the greater part of his mass against the defender's concentrated mass.¹⁷⁸

But in another passage Clausewitz writes: "The preservation of one's fighting forces and the destruction of the enemy's – in a word - victory is the substance of this struggle; but it can never be its ultimate object. The ultimate object is the preservation of one's own state, and the defeat of the enemy's; again in brief, the intended peace treaty, which will resolve the conflict and result

¹⁷³ *Warfighting*, 46

¹⁷⁴ Clausewitz, *On War*, 358

¹⁷⁵ *Ibid.*, 84

¹⁷⁶ *Ibid.*, 248

¹⁷⁷ *Ibid.*, 75

in a common settlement.”¹⁷⁹ By this he seems to mean that military victory is not the ultimate end. It is only the means to a peace in which opposed wills unite.

Aron has presented an explanation for these contradictions. He argues that Clausewitz moved away from a definition that saw war as a clash of wills because of Clausewitz’s problem with the dialectic between the armed forces and territory, hence Mearsheimer’s and Delbrück’s definitions of two types of war.¹⁸⁰ One needed to make the enemy powerless to overcome his will. Each of the belligerent states was seen as divided into an armed force and a territory. The armed forces were dependent upon the territory’s ability to maintain, support and regenerate the armed forces. But possession of some or sometimes the whole enemy territory did not always assure the destruction of the enemy armed forces. In contrast, the destruction of the armed forces would assure possession or conquest. The enemy was then powerless. By moving away from the abstract and moral factor of “conflicting wills”, this problem could be resolved. “[T]he wills aim at the overthrow of the enemy state. Since each state consists of territory and an army, both are objects of attack and defence. Each wants to preserve itself and destroy what the other possesses. As territory is controlled by the army but not the reverse, at least in the short term, the primary target of whichever side wants to conquer the other is the armed forces of the enemy.”¹⁸¹ Thus a *Niederwerfungsstrategie* with the annihilation of the enemy army was preferred.¹⁸²

Clausewitz brought his logic forward when applying Newton’s physics to war. Clausewitz concluded that each belligerent had a certain unity and therefore some cohesion. “Where there is cohesion, the analogy of the center of gravity can be applied.”¹⁸³ According to Clausewitz the fighting forces possess certain centres of gravity where they are most densely concentrated. By that he concluded that the movement and direction of these centres of gravity would govern the rest of the more dispersed forces.¹⁸⁴

The problem in wars and campaigns was that battles were numerous and separated. The defender tended to disperse his forces in order to guard the territory. By doing that the “connection” between the different units was weakened. It would also be harder to determine what was the correct centre of gravity [i.e. the densest mass]. In contrast, the attacker sought to keep his forces

¹⁷⁸ Naveh, *In Pursuit*, 47

¹⁷⁹ Clausewitz, *On War*, 484

¹⁸⁰ Aron, *Clausewitz*, 158. See also 153

¹⁸¹ *Ibid.*, 158

¹⁸² *Niederwerfungsstrategie* and *Vernichtungsstrategie* seem to be used in a complementary fashion. The former is about overthrow whereas the other is about annihilation.

¹⁸³ Clausewitz, *On War*, 485, see also Clausewitz, *Vom Kriege*, Zweiter Band, 389. Clausewitz used the term “Zusammenhang”. This could be translated to either “cohesion” or “connection”, which may give slightly different interpretations.

concentrated. This would facilitate a strong connection between the units and consequently a stronger centre of gravity. Because of the dispersed enemy, and the problem of determining which of his units constituted the strongest centre of gravity, the attacker risked using his strongest forces in vain. It was a “waste of energy which in turn [meant] a lack of strength elsewhere.”¹⁸⁵ In other words, beating a defending unit would not produce the necessary side effects, because the connection between a chosen target and the rest of the defending army was too weak. Clausewitz suggested that “[t]he general action may therefore be regarded as war concentrated, as the centre of gravity of the whole war or campaign.”¹⁸⁶ By this he presents a holistic view, where the mechanics of each tactical battle in itself represents smaller centres of gravity. The effects or result of each battle makes up the centre of gravity as an entity at the highest level. But because of the dialectic between dispersion and concentration in attack and defence, Clausewitz recognised that there was a limit. Thus, he defined this limit as a theatre of operations. This extended as far as the direct effects of a victory or of a decision over the principal forces of the enemy.¹⁸⁷ What was his ideal was that a theatre of war represented a sort of unity where a single centre of gravity could be identified. As both belligerents had the same aim, the overthrow of the opponent’s army, both would concentrate their forces. This was the point where the decision should be reached – an implosion of two opposing centres of gravity in an *Entscheidungsschlacht*.

Naveh argues correctly when he states that this is to subject war to a mechanistic duel. However, Clausewitz wrote both about “absolute war” which was the Platonic ideal war, and war as it was in reality.¹⁸⁸ When he for example used the “duel” as a metaphor in Book 1, Chapter 1, section 2, he modified this in section 11 with the political considerations of the war.¹⁸⁹ “The political object – the original motive for the war – will thus determine both the military objectives to be reached and the amount of effort it requires.”¹⁹⁰ In Clausewitz’s work one can read that the political object of the war hitherto “had been overshadowed by the *law of the extremes*, the will to overcome the enemy and make him powerless. But as this *law* begins to lose its force and as this

¹⁸⁴ Clausewitz, *On War*, 486

¹⁸⁵ *Ibid.*, 486

¹⁸⁶ *Ibid.*, 258

¹⁸⁷ Aron, *Clausewitz*, 159

¹⁸⁸ Howard, *Clausewitz*, 47. See Gat, *The Origins of Military Thought*, 233. Gat is of the opinion that Clausewitz was influenced by Hegel.

¹⁸⁹ Clausewitz, *On War*, 75-80

¹⁹⁰ *Ibid.*, 80-81

determination wanes, the political aim will reassert itself.”¹⁹¹ One could by this statement believe that the law of the extremes was allowed to play an independent part during conflict. However, Clausewitz emphasised that it would be apt to assume that war should replace politics and be “ruled by no law but its own.”¹⁹² Aron’s explanation must therefore be seen as an example of the ideal war. As we shall see below, it seems that the Germans interpreted Clausewitz’s book in a way that allowed for the law of extremes to play its part during a conflict.

5.2 Moltke

During the Franco-Prussian war in 1871, an argument between Bismarck and Moltke took place. Militarily the German army had all but won the war, and Napoleon III was a captive. But the Parisians, headed by Gambetta, were determined to fight on. Bismarck, the German Chancellor, wanted to bombard Paris in order to terminate the war quickly. Moltke disagreed. The military resources could be used better elsewhere, and the Parisians could be starved into surrender. Bombardment would only stiffen the resistance among the population. Bismarck turned to the Kaiser and got his support. However, this was a rare exception. During the Franco-Prussian war, Bismarck was in fact more or less kept away from the possibility of influencing the operations of the German military.¹⁹³

In his thesis of 1871, “*Über Strategie*”, Moltke defined the terms strategy, operations and tactics. First, the role of strategy was to achieve the aims formulated at the political level. Second, strategy involved the preparation of the military means and the initiation of military action. Third, strategy involved the utilisation of the prepared military means through operations. Moltke’s *operative Denken* also included the differentiation of aims. He distinguished clearly between the *Operationsobjekt* and *Kriegsobjekt*. The *Operationsobjekt* was the enemy’s armed forces, when these protected the *Kriegsobjekt*. The latter was normally the capital, the resources, the territory and the political power of the opponent state.¹⁹⁴

The term “*Operationen*” was not, by Moltke’s definition, an intermediate decision or command level between tactics and strategy.¹⁹⁵ *Operativ* was the operationalisation of military strategy. In military writings in late 19th century Germany, the term “*Operationen*” was mostly used in relation to the deployment and movement of troops. *Operationen* was instrumental to the

¹⁹¹ Ibid., 80. The law of the extremes is described in book 1, chapter 1. There were three extremes or interaction: the maximum use of force, the aim of disarming the enemy and the maximum exertion of strength. This law was modified by for example political considerations.

¹⁹² Ibid., 605

¹⁹³ Rothenberg, Gunther E., Moltke, Schlieffen, and the Doctrine of Strategic Envelopment, in Paret, *Makers*, 305

¹⁹⁴ Foerster, Roland G., *Das Operative Denken Moltkes des älteren und die Folgen*, in Roth, Günter, *Operatives Denken bei Clausewitz, Moltke, Schlieffen und Manstein*, (Freiburg, 1989), 23

convergence of troops at the site of the *Entscheidungsschlacht*. It was: "Getrennt marschieren, vereint schlagen!"¹⁹⁶ However, the armies grew bigger and the demand for more space to manoeuvre also made them more difficult to control. The strategy of the single point lost relevance. The commanders sought to stretch Napoleon's "single point" decisive battle laterally. By pinning the enemy frontally, and simultaneously extending to the enemy's soft flank, one could achieve envelopment. The difficulties of control, and the fog and friction of war, led Moltke to hold more strongly the conviction that his subordinate commanders had to think and act according to the situation.¹⁹⁷ In order to achieve envelopment on a grand scale, the German army commanders were given directives as opposed to detailed orders. A superior grasp of the situation and conduct of the action as a whole with the conviction that the whole determined the parts "would compensate for any errors made in detail by senior subordinate commanders."¹⁹⁸ Thus, what we call mission command has historically a relevance to the German notion of the operational level.¹⁹⁹ In the lower echelons a rather strict discipline were held.²⁰⁰

It seems that the Germans isolated what we by modern standards would call the operational level. In Moltke's view, war was an instrument of policy, but politics only played an influential part at the beginning of and at the end of a war. Politics should not influence the operations.²⁰¹ This view is not consistent with Clausewitz's ideas on the primacy of politics. However, it is identical to the opening sentences from book 1, chapter 1, section 11, as referred to above. This view implied that the German generals did their functions as masters of the "Gesetz des Äußersten" independently of the war's grand strategic objectives. For Moltke, the ultimate military purpose was the destruction of the enemy's armed forces, the *Operationsobjekt*. Only through a *Niederwerfungsstrategie* with the means of a *Vernichtungsschlacht* could one dictate a peace that was in accordance with the grand strategy. The legacy of Moltke also inspired the future German generals in another important aspect. Moltke's dilemmas during his last years was

¹⁹⁵ Ibid., 23

¹⁹⁶ Hobson, Rolf, *Fra kabinettsskrigen til den totale krigen*, (Oslo, 1994), 84

¹⁹⁷ Echevarria, Antulio, Moltke and the German Military Tradition, *Parameters*, (spring, 1996), 94. The legacy from the military reforms in Prussia in the early 19th century laid the foundation for a greater degree of independent action.

¹⁹⁸ Wallach, Jehuda L., *The Dogma of the Battle of Annihilation*, (Connecticut, 1986), 194

¹⁹⁹ Foerster, *Das Operative Denken Moltkes*, in Roth, *Operatives Denken*, 29

²⁰⁰ Crevelld, Martin van, *Fighting Power*, (Connecticut, 1982), 36. Based on the studies of German manuals from 1906 and 1908, Crevelld deduces that the mission command concept was something that was prevailing down to the lowest echelons since the days of Moltke. Gudmundsson, Bruce, *Storm Troop Tactics*, (Westport, 1995), 23. He states that the German army was one of the most decentralised in Europe. However, discipline for the lower ranks was upheld, despite army regulations that proposed differently. At best there was a varying degree of rigid discipline. An attribute of decentralisation is that not everybody adheres to the same regulation, which in turn leaves commanders free to choose the degree of discipline.

²⁰¹ Hobson, *Fra kabinettsskrigen*, 103

that the war with France and the development of European societies made it difficult to isolate a war with unlimited military objectives as a continuation of policy from total war. "We want to believe," he told the Reichstag, "that neither the Thirty Years' nor the Seven Years' War will recur, but when millions of individuals are engaged in a bitter struggle for national existence, we cannot expect that the matter will be decided with a few victorious battles."²⁰² The era of Cabinet Wars was over. The solution to this was the pre-emptive attack.²⁰³

5.3 Schlieffen

These lines of thought were brought forward and refined by Moltke's successor. Clausewitz's theories and Moltke's praxis were synthesised in Schlieffen's writings, where his *Denkschrift* of 1906 perhaps best illustrates this. The 1906 *Denkschrift* was later to become known as the Schlieffen Plan.

According to Zuber, German planning prior to World War I, including that of Schlieffen, was more pragmatic than the *Denkschrift* indicates. Zuber suggests that the German army in 1914 actually made plans according to the anticipation that it was the French that would conduct the opening moves. The French army, it was believed, would launch a main and a supporting attack through Lorraine and the Ardennes. The German plan was to beat the French attack decisively in the first battle. They would then conduct the second phase of the campaign, and go on the offensive. The army would wheel behind the French fortress line. Once this campaign was successfully accomplished the Germans would launch a second campaign into the interior of France.²⁰⁴

However, after WW I, German historians interpreted the 1906 *Denkschrift* as the template for all subsequent war plans prior to 1914.²⁰⁵ Schlieffen envisaged a pre-emptive attack with the aim of a gigantic Cannae-like battle of annihilation. That would satisfy the *Niederwerfungsstrategie*.²⁰⁶ Due to Germany's fear of a two front war, a sort of *Ermattungsstrategie* would have violated Clausewitz's law of the extremes. The interpretation of Clausewitz brought forward the idea that it was a waste of energy not to concentrate the force to the utmost.²⁰⁷ Thus Schlieffen differed from Moltke in one important respect. In Schlieffen's view, Moltke had violated the principle of concentration by the introduction of directive control. Army commanders had occasionally lost sight of the central objective. It was a strategy of expedients. It seems that Schlieffen's

²⁰² Echevarria, Moltke, 92

²⁰³ Hobson, *Fra kabinettskrigen*, 114

²⁰⁴ Zuber, Terence, The Schlieffen Plan Reconsidered, *War in History*, (6, 1999), 305

²⁰⁵ Ibid., 268

²⁰⁶ Rothenberg, Moltke, Schlieffen, in Paret, *Makers*, 312

interpretation of Clausewitz lead to a centralisation of command and detailed pre-planning. However, apparently some degree of freedom was maintained. Staff officers were sent out to the various field units acting as the “eyes” of the General Staff. These staff officers were what Crevelld calls, “directed telescopes”.²⁰⁸ If commanders in the field should enjoy some degree of freedom, it required a control system that allowed the General Staff to take part in the subordinates’ decisions. This twin command system was supposed to balance each other in the *Gesamtschlacht*.

Schlieffen’s grand scheme, the *manoeuvre a priori* as Rothenberg calls it, expressed his idea of a *Gesamtschlacht*.²⁰⁹ “[It] combined diverse battlefields and partial battles into an “integral operation” in which military action no longer consisted of maneuvers that narrowed down the space of an operation to the actual battlefield and culminated in a final and decisive battle with the enemy’s main forces. The new “integral operation” knew only one joint and continuous movement, whose object was not any specific battlefield or specific concentration of forces at a given place, but the unfolding dynamics of military action against a whole nation or even nations. Schlieffen thus replaced an arithmetical concept of operations, which added up battles into a campaign, with a dynamic one that developed out of deployment and rolled on, self-sustaining and gathering velocity in a grand enveloping action [...] This drastically altered the relation between individual battles and the military campaign overall. Now there were no individual battles, but only the expanding torrents of a campaign.”²¹⁰ Geyer’s description illustrates the idea behind Clausewitz’s imagination of the ideal centre of gravity.

However, according to Zuber, “[t]here never was a “Schlieffen Plan”.²¹¹ The plan envisaged in the *Denkschrift* required more divisions than Germany created before the war. Thus when war broke out in 1914, the German army did not have enough forces for the wheeling around Paris. When the Schlieffen plan apparently had failed, blame was put on Moltke the younger. Moltke had not understood Schlieffen’s operational design. He made the right wing that was supposed to wheel round the French capital, too weak. Accordingly, the holding force in Lorraine was made unnecessarily strong.²¹² Blame was also put on the decision of what modern manoeuvrists would call an independent thinking General Staff officer, acting as a “directed telescope”. For the admirers of Schlieffen it was an “irresponsible decision” to withdraw behind the Marne at the

²⁰⁷ Clausewitz, *On War*, 486

²⁰⁸ Crevelld, *Command in War*, 172

²⁰⁹ Rothenberg, Moltke, Schlieffen, in Paret, *Makers*, 314

²¹⁰ Geyer, German Strategy, in Paret, *Makers*, 532

²¹¹ Zuber, The Schlieffen Plan, 305

²¹² *Ibid.*, 263

very moment of alleged victory [...].”²¹³ The opening battles did not produce a decision and as the battles in the autumn of 1914 petered out, the Germans had reached their culminating point. However, this did not necessarily imply that the political aims reasserted themselves.

5.4 Ludendorff

When Ludendorff came to power, he reversed the traditional isolation of operational conduct. Or rather, operational conduct became the grand strategic guidance, whose aim of total victory shaped all society.²¹⁴ Unlimited war stopped being a continuation of policy and became total. His technocratic rule, with a quest for efficiency, or rather increased “mechanisation” of the whole society, also led to reforms in the army. These reforms bear noteworthy similarities to some aspects of modern manoeuvre warfare.

The evolution of “elastic defence” led to a dispersal of units. This in turn, to paraphrase Clausewitz, meant that the cohesion of the centre of gravity became weaker, at least initially. To compensate for this, two interrelated factors emerged. First, dispersal meant that units had to rely on their own ability to survive more than relying on support from higher echelon units. Thus, lower level units were given organic weapons that previously had been held at higher echelons. They now became all arms units. Second, to compensate for a weaker connection/cohesion, the traditional system of hierarchy was replaced with a further decentralisation of the command system. But this *Auftragstaktik* was more linked to the optimisation of the use of weapons. According to Crevelde, the control of the actual fighting devolved to junior ranks and NCOs as a necessity because of the all arms concept.²¹⁵

The new units required soldiers with certain personality traits. These new “stormtroopers” developed a spirit that was at odds with that of line infantry. Trench warfare had turned the ordinary infantryman into a species of laborer.²¹⁶ The ordinary infantry soldiers were kept going by a combination of patriotic propaganda, coercion and solidarity with his fellow soldiers. The stormtroopers were encouraged to look upon war as the supreme fulfilment of one’s self, or at least it was what Ludendorff wanted.

In relation to Bertalanffy’s theory, the evolution of army organisation led to an increased “mechanical” behaviour in the conduct of military action. It offered the “opportunities for self-designated activity and mission oriented action, even down to the individual soldier.”²¹⁷

²¹³ Herwig, Holger H., *The First World War, Germany and Austria-Hungary*, (London, 1997), 104

²¹⁴ Geyer, German Strategy, in Paret, *Makers*, 541

²¹⁵ Crevelde, *Command in War*, 168

²¹⁶ Gudmundsson, *Storm Troop*, 81

²¹⁷ *Ibid.*, 151

Increasing “mechanisation” also meant increasing determination on the part of the units to depend only on themselves.²¹⁸ But the segregation of the army and society also brought forward an increase in centralisation. A gap developed between the tactical and the strategic level. If the case had been that the achievement of the *Kriegsobjekt* would lead to a better peace, the aim might have imposed regulability on the German army. That would have created a cognitive tension between an abstract strategic aim and the objectives lower down the hierarchy. The case is that Ludendorff inherited the idea that the real grand strategic aim was the *Operationsobjekt*. In one sense then, for Ludendorff, there was in fact no disequilibrium between the objectives of the units and the system as a whole. The aim was the destruction of the enemy armed forces. This could have worked if the war could be isolated to a pure military confrontation, a cabinet war, between the involved nations. But because the war, as Moltke had feared, had become a struggle for the nation’s survival, it led to such a mobilisation of national resources that the belligerents could only be overcome through a combination of military defeat and psychological and physical national exhaustion. The factor of “will” had to be put into a larger context than the pure military domain. By making the war machine more efficient in terms of a Clausewitzian absolute war, and with the aim of *Vernichtung*, the strategic level became mono-stable. Attrition was the only solution.

In Moltke’s view, strategy was a system of ad-hoc expedients.²¹⁹ Schlieffen disapproved and centralised control, relying on his belief that the mechanism of the operation would compel the enemy to conformity. Ludendorff turned this upside down. “Gaining many little successes means the gradual accumulation of a treasure. In the course of time one grows rich without even knowing it.”²²⁰ It seems that it was on the basis of this assumption that the last German offensives were planned and executed. For Ludendorff tactics now prevailed over strategy. “I do not want to hear the word operation. We hack a hole [into the front]. The rest comes on its own.”²²¹ Crevelde suggests that the Germans in their orders for attack introduced minimum objectives. Any progress beyond the line on which these objectives lay, would be “thankfully welcomed by the Army and made use of”.²²² However, Rupprecht, one of the Army Group commanders, wrote in his diary at the end of the offensive. “It is obvious that one cannot discern

²¹⁸ Bertalanffy, *General System Theory*, 69.

²¹⁹ Holborn, Hajo, *The Prusso-German School: Moltke and the Rise of the General Staff*, in Parat, *Makers*, 290

²²⁰ Ludendorff, Erich von, *Kriegführung und Politik*, (Berlin, 1922), 214, in Wallach, *The Dogma*, 195

²²¹ Herwig, *The First World War*, 400. See also Ludendorff, Erich von, *General Ludendorffs Kriegerindringer 1914-1918*, (Köbenhavn, 1919), 414. Ludendorff stated that the offensive was not an operation, but that he hoped the offensive would develop into one.

a proper purpose in all OHL's directives. They always mention certain landmarks, which should be reached, and one gets the impression that OHL, [...] lives from hand to mouth, without acknowledging a fixed purpose."²²³ The offensives fanned out without any recognisable *Schwerpunkt*, perhaps as a result of advances on lines of least resistance beyond the minimum objectives.

With respect Ludendorff's "*operative Dänken*", it is noteworthy that one of the modern manoeuvrists' greatest sources of inspiration, Liddell Hart, supports his line of reasoning. In his view the statement that tactics "governs" strategy is by "default of a strategic indirect approach [...] undoubtedly true."²²⁴ Samuels takes the view that Ludendorff's neglect of strategy is "in fact a thoroughly sound appreciation of military reality."²²⁵ Accordingly, lofty strategic goals would be valueless if a break out was not achieved.

In Liddell Hart's opinion, Ludendorff failed because he pitched strength against strength. Neither Ludendorff himself nor all historians agree on this. Liddell Hart's basic line was, however, that Ludendorff would have reached his goal if he had followed the indirect approach. The conduct of war should be like an expanding torrent of water, a metaphor that is widely favoured by many advocates of manoeuvre warfare.²²⁶ The last German offensives did actually become an expanding torrent. But in relation to strategy and operational art, it appears that the metaphor may only be useful if channels and canals are built, at least imaginary. Otherwise the water will be absorbed somewhere on the Russian steppes, as in the case of Napoleon or Hitler, or more recently, in the dusty streets of Baghdad. Without a proper operational design to facilitate the

²²² Crevel, *Command in War*, 170. Crevel makes a point out of the difference between setting minimum objectives, as he claims the Germans did during the offensive, and what he claims to be the British system of setting maximum objectives.

²²³ Kronprinz Rupprecht von Bayern, *Mein Kriegstagebuch*, vol 2, 372, (München 1929) in Wallach, *The Dogma*, 192

²²⁴ Liddell Hart, *Strategy*, 205. See also 369. Liddell Hart seems to contradict himself as he states: "While fighting is a physical act, its direction is a mental process. The better your strategy, the easier you will gain the upper hand, and the less it will cost you."

²²⁵ Samuels, Martin, *Command or Control*, (London, 2003), 273

²²⁶ Lind, *Maneuver Warfare Handbook*, 9, from B. H. Liddell Hart's 'The 'Man-in-the-Dark', Theory of Infantry Tactics and the 'Expanding Torrent' System of Attack, *Journal of the R.U.S.I.*, February 1921, 13. "If we watch a torrent bearing down on each successive bank or earthen dam in its path, we see that it first beats against the obstacle, feeling and testing it at all points. Eventually, it finds a small crack at some point. Through this crack pour the first dribblets of water and rush straight through. The pent-up water on each side is drawn towards the breach. It swirls through and around the flanks of the breach, wearing away the earth on each side and so widening the gap. Simultaneously the water behind pours straight through the breach between the side eddies which are wearing away the flanks. Directly it has passed through it expands to widen once more the onrush of the torrent. Thus as the water pours through in ever-increasing volume the onrush of the torrent swells to its original proportions, leaving in turn each crumbling obstacle behind it. Thus Nature's forces carry out the ideal attack, automatically maintaining the speed, the breadth, and the continuity of the attack."

better peace, the spirit of the stormtrooper, which according to Lind was enshrined in the German post-war regulations seems to have been contra-productive.²²⁷

5.5 The interwar-years

When the German army was recreated within the limits of the Versailles treaty, it took on the task of analysing the experiences of the war in the fields of both military operations and grand strategy. The Germans realised that the country could not endure a long war of attrition. As in 1914, a doctrine of strategic defence that called for tactical offence with the aim of decisively winning the first battles re-emerged. The geo-strategic position, with the risk of a two front war coupled with the economic outlook, meant that the German army had to conduct rapid sequenced campaigns designed to envelop and annihilate the attacking enemies.²²⁸ This was also nourished by several other factors.

The German interpretation of Schlieffen's works after the war, blamed the incompetent generals who led the army in its opening phase for the perceived failure to accomplish the ultimate Cannae-like battle. The image of a German army that was not beaten in the field, but betrayed by soft politicians gave birth to the *Dolchstoß* myth. After all, the German offensives of 1918 had revealed promising results in breaking the deadlock on the Western Front.

The head of the *Truppenamt*, Seeckt, had been involved with the development of the German infiltration tactics during the war and many German officers, including Seeckt, gained experience from the more fluid Eastern Front.²²⁹ Thus the German officers corps was less biased by the experiences of the static trench warfare than for example their French counterparts. Among the Germans there was a belief that mobility could be restored to the battlefield. Indeed motorization was a prerequisite to ensure the small German army to envelop and annihilate enemies in a two front war. This was coupled with the idea of treating the small army as a professional elite, a *Führerheer*, as a basis for future expansion.²³⁰

Through the co-operation with the Russians, the Germans saw the potential of the combination of air power and armour. In the wake of this, different schemes for providing the necessary development of tactics and equipment were launched. This involved co-operation with domestic and international industry as well as the setting up of different covert organisations and offices. The efforts to learn from the operations during the war, and the new weapons the war had

²²⁷ Lind, *The Origins of Maneuver Warfare*, in Olsen, *From Manoeuvre Warfare*, 31

²²⁸ Corum, James S., *The Roots of Blitzkrieg*, (Kansas, 1992), 87, 95

²²⁹ Strachan, Hew, *European Armies and the Conduct of War*, (London, 2004), 161

²³⁰ Goerlitz, Walter, *The History of the German General Staff*, (London, 1967), 223

brought forth were manifested in regulations that culminated with Army Regulation 300, *Truppenführung*, first published in 1933.

5.5.1 The Development of Blitzkrieg

The development within the German army towards its so-called Blitzkrieg approach and how this was manifested through *Truppenführung* have been interpreted differently by modern authors and historians. In an article from 1989, Raudzens identified seven different definitions of the term Blitzkrieg, which is a challenge when relating these to the different perceptions of modern manoeuvre warfare.²³¹

5.5.1.1 Was there a Blitzkrieg Doctrine?

According to Miksche, who wrote a book on Blitzkrieg in 1941, the basis for the German successes in 1940, were surprise, speed, and superiority in material. Moreover he claimed that a typical Blitzkrieg operation should be planned in minute detail with full allowance made for all probable alternative developments. This is contrary to the argument of some manoeuvrists. "The planning has to go back beyond the actual arrangement of the operation itself, and must include the organization of forces that can co-operate efficiently so that different units work together on agreed and prepared schemes, their work being co-ordinated in time and space."²³² This definition of Blitzkrieg has more in common with the writings of Naveh and Simpkin, than for example with Lind. Moreover, Miksche claimed that Blitzkrieg could be systemised logically: "The aim is Cannae, the method irruption. Next stage in the argument: the aim is irruption, the method is concentration on a narrow front. But here comes in also a third stage in the argument, which should logically be interposed between concentration and irruption, as the method by which the concentrated forces achieve the piercing of the enemy's defences. The aim is to carry the local superiority due to concentration forward: the method is described by the two German words *Schwerpunkt* and *Aufrollen*. [...]. They have both a strategic and an operative or a tactical meaning, [...]."²³³

Truppenführung describes three forms of attack, frontal, penetration and envelopment. Frontal attacks are means for penetration. The penetration is a means for envelopment. The envelopment also required that the enemy's front be fixed, which implies both a holding force and an advancing force.²³⁴ There are several passages in *Truppenführung* that stress envelopment as a preferred pattern, but it is not a dogma. The two other forms of attack could as well achieve a

²³¹ Raudzens, George, Blitzkrieg Ambiguities: Doubtful Usage of a Famous Word, *War and Society*, (6, 1989), 77

²³² Miksche, Ferdinand O., *Blitzkrieg*, (London, 1942), 28

²³³ Ibid., 52-53

successful outcome. Guderian wrote that attacks should be conducted on a broad front, where tank forces were organised into three or four lines. These lines, perhaps more in accordance with echelons as envisaged in Soviet deep operations theory, were given different types of targets to destroy. His idea of attacking on a broad front might be in conflict with his ideas on the *Schwerpunkt*, where he recommends concentration of forces on the decisive point.²³⁵

As we have seen earlier, Lind claims that Blitzkrieg was conceptually complete by 1918. Apparently all the Germans had to do was to write it down in a field manual. This field manual, *Truppenführung*, was according to Messenger, merely a pamphlet that showed little advance from the tactics of 1918. In contrast, the idea of Blitzkrieg was manifested through Guderian's visions.²³⁶ According to Citino, the Wehrmacht had a mature doctrine for armoured warfare at the outbreak of WW II.²³⁷ By doctrine he seems to mean not only the manual *Truppenführung*, but also the dominant operational thinking and teaching within the German army.

Corum agrees with Messenger's statement on tactics. Although Corum sees the continuity of a Cannae-tradition, he claims for example that the Reichswehr's most interesting tactical development was that, "[b]attalions and companies [...] pushed forward and continued to push forward, regardless of whether there were troops on their right or left, until stopped by the enemy."²³⁸ This bears many similarities with the offensives of 1918. However, the field exercises Corum refers to might not have been more realistic than those Moltke the younger tried to stop a couple of decades earlier.²³⁹

According to Citino, the students at the *Kriegsakademie* learned that "[i]t is false, to restrict the mobility of the [Panzer] unit to that of the infantry".²⁴⁰ Apparently the armoured units should push forward in the style Corum describes, and in accordance with the concept of minimum objectives as presented by Crevelde. The idea of having troops projecting themselves rather independently into the rear of the enemy as a "jazz group jamming" is somewhat contrary to what is stressed in *Truppenführung*. Flanks had to be protected, which implies that the tempo of the advance has to take this into account. Units should not advance beyond their attack objectives unless specifically authorised to do so. Without flank protection there was a risk that

²³⁴ Condell, Zabecki, *Truppenführung*, 89-90

²³⁵ Guderian, Heinz, *Achtung Panzer*, (London, 1999), 190-191, 206

²³⁶ Messenger, Charles, *The Art of Blitzkrieg*, (London, 1976), 79

²³⁷ Citino, *The Path*, 242-243

²³⁸ Corum, *The Roots*, 185

²³⁹ Wallach, *The Dogma*, 88. See also Goerlitz, *German General Staff*, 144

²⁴⁰ Citino, *The Path*, 242-243

one would become enveloped oneself. But again the law of the situation did not exclude open flanks.

Naveh criticises Messenger for his claim that *Truppenführung* was a pamphlet, and is of the opinion that *Truppenführung* was a notable and the only operational dissertation to be made under the Nazi regime.²⁴¹ Van Creveld, comparing *Truppenführung* with the 1941 version of FM 100-5 shows *quantitatively*, by counting the number of insertions of terms like “attack”, “defence”, etc., that the American doctrine was much less single-minded than the German one. Creveld claims, for example, that the U.S. doctrine with its emphasis on teamwork implies a prerequisite for co-ordination and control. He is of the opinion that this has no direct equivalent in the German doctrine, and concludes that the German doctrine put less emphasis on planning, control and managerial aspects.²⁴² But, then, he is not counting the insertions of the term “co-operation” and associated terms in the manual. However, as *Truppenführung* emphasised the use of combined arms, there are several passages dedicated to the importance of synchronisation and co-ordination of the different arms.²⁴³ That is a lesson the Germans obviously learned during the First World War. The emphasis on combined arms, supports Naveh’s impression that it could be regarded as an operational dissertation in the Jominian sense. However, much of the manual’s content is focused on somewhat lower level tactics, which by modern standards belong in service regulations and handbooks.

What the doctrine and the German ideas of Blitzkrieg were not, is what Posen suggests. A Blitzkrieg style attack aimed directly at the adversary’s command, control communications, and intelligence functions (C³I).²⁴⁴ The German doctrine, and Guderian, if he is to be regarded as the most prominent advocate of Blitzkrieg, did not emphasise attacks directed at the enemy’s command and control elements, nor did they write about overtaxing the opponent’s command system. Command posts were just one target among many, both for the army and air force. The

²⁴¹ Naveh, *In Pursuit*, 152. Naveh also criticises Messenger for having failed to note the proper publication date of *Truppenführung*. Messenger is relating to a 1933 version, whereas Naveh apparently is relating to a 1936 version. Creveld, *Fighting Power*, 29. Van Creveld refers to two volumes of *Truppenführung* that were published in 1936. Von Hammerstein Equord and Von Fritsch signed the two volumes. However, the two German generals also signed the respective 1933/1934 version. As von Hammerstein Equord resigned early 1934, and as his signature obviously was kept in the 1936 version Creveld refers to, it is likely that the different authors are dealing with the same document, only with different publication dates. See also Corum, *The Roots*, 199. He refers only to the 1933 version, which he claims was kept until 1945. Citino, *The Path*, 223, 265, refers to a 1936 version in his bibliography, but mentions only a 1933 version in the text.

²⁴² Creveld, *Fighting Power*, 33-34. See also Condell, Zabecki, *Truppenführung*, 280. An analysis conducted by German officers where they compared the 1949 version of FM 100-5 with the German doctrine concluded that the two documents coincided closely.

²⁴³ Condell, Zabecki, *Truppenführung*, 103

²⁴⁴ Posen, Barry R., *The Sources of Military Doctrine*, (London, 1984), 206

manual stresses above all the importance of neutralising enemy artillery and infantry. Guderian wanted to concentrate his armour where there was to be a decisive battle.²⁴⁵

5.5.1.2 Auftragstaktik

The idea of Auftragstaktik and German orders presented by some manoeuvrists is exaggerated, at least in relation to the German doctrinal thinking. Citino, for example, makes a point out of what he claims was a German contempt for formal (written) orders during the inter-war years. He claims that the division was the lowest unit that operated with them, and notes that the Germans obviously spoke laughingly about both French tactics and their adherence to written orders.²⁴⁶ However, *Truppenführung* states that "[w]ritten order is the basic means by which the senior commander controls his units. [...]. In the case of simple or short orders, the commander may transmit the order verbally. Later, however, the text must be committed to writing."²⁴⁷ Guderian confined the idea of short orders and special signals to that of the Panzer forces. "In combat the transmission of orders are conveyed to the [...] armoured forces in different and much shorter forms than with the infantry divisions."²⁴⁸ Uhle-Wettler, a Wehrmacht veteran soldier and later a Lieutenant General and historian, notes that "[...] a comparison of Allied and German World War II operations orders reveals few differences and certainly none that are large enough to explain differences in force efficiency. Consequently, a change in the format for phrasing of combat orders [as for example Lind proposes] will not produce a revival or an adoption of Auftragstaktik."²⁴⁹

According to *Truppenführung*, Auftragstaktik was formulated as follows: "The commander must allow his subordinates freedom of action, so long as it does not adversely affect his overall intent (*Absicht*). He may not, however, surrender to his subordinate's decision for which he alone is responsible."²⁵⁰ The manual also stated that it is the independent action of subordinate commanders with the prerequisite of close co-ordination that will decisively influence the success of the advance. This had to be through "careful synchronization of fire and movement."²⁵¹ Even Guderian, who is regarded by some manoeuvrists as the antithesis to the more conservative generals of the traditional arms, looked upon thorough planning and

²⁴⁵ See for example Guderian, *Achtung Panzer*, 190, 196, 202. See also Condell, Zabecki, *Truppenführung*, 194

²⁴⁶ Citino, *The Path*, 97, 137. Citino returns to the German preference for the use of oral orders on several pages in his book.

²⁴⁷ Condell, Zabecki, *Truppenführung*, 29

²⁴⁸ Guderian, *Achtung Panzer*, 198

²⁴⁹ Uhle-Wettler, Auftragstaktik, in Hooker *Maneuver Warfare*, 238. See also Lind, *Maneuver Warfare Handbook*, 30

²⁵⁰ Condell, Zabecki, *Truppenführung*, 23-24

²⁵¹ Ibid., 90, 101

synchronisation as paramount. In his book *Achtung Panzer*, he criticised the allied conduct of tank battles during the autumn of 1918 for the lack of co-ordination and simultaneity, and for not directing their tanks towards a common objective. "There was no real need for haste and disorder of this kind [...]."²⁵²

According to Hughes, the commander formulated the intent, (*Absicht*). In this the Germans saw what other western armed forces would call a mission. "The commander then assigned tasks (*Aufträge*) to subordinate units to carry out his and his superior's intent. The subordinate commander decided upon a specific course of action which became his resolution (*Entschluss*)."²⁵³ One would expect the intention (*Absicht*) to be in accordance with the objective set for a campaign. In that respect the German approach does not appear to have deviated much from the doctrinal thinking of other nations. Recognition of the importance of the principle of a common objective has prevailed as imperative among other armed forces during the 20th century.²⁵⁴

5.6 Conclusion

Truppenführung gives the impression that it is a rather pragmatic manual. As opposed to many contemporary doctrines, it is more descriptive than prescriptive. It is devoid of any dogmatic rules, which would compel commanders to act or behave in a certain pattern. One can find passages that support whatever argument one has on how to conduct operations. With regard to doctrine, this makes it difficult to bring forward a clear picture of the Germans' operational cognition, other than that it was rather pragmatic and that the Wehrmacht strongly believed in the idea of combined arms. Thus, the conclusions presented by different historians and authors with regard to the German doctrine do not need to be mutually exclusive. There were traditionalists and progressive forces within Wehrmacht. The comments Rundstedt, the Commander of Army Group A gave to Guderian after an armour exercise in the late 1930s perhaps illustrates the point: "All nonsense, my dear Guderian, all nonsense."²⁵⁵

Hammerstein-Equord noted in *Truppenführung*: "This manual assumes strength, arms, and equipment in an army with unlimited resources."²⁵⁶ Thus one would assume that the lesson from the First World War, that the strategy of the entire nation at war had become a kind of intellectual and organisational continuum linking the front to the supporting rear would be

²⁵² Guderian, *Achtung Panzer*, 126

²⁵³ Hughes, Daniel J. Abuses of German Military History, *Military Review*, (December, 1986), 67

²⁵⁴ Alger, John I., *The Quest for Victory*, (London, 1982), for a study on the principles of war.

²⁵⁵ Plettenburg, M., *Guderian: Hintergründe des deutschen Schicksals, 1918-1945* (Düsseldorf, 1950), 14, in Williamson, Murray, Barry Watts, *Military Innovation in Peacetime*, (2000), <http://www.capitolsource.net/files/MIInnovPeace.pdf>, 16

²⁵⁶ Condell, Zabecki, *Truppenführung*, 16

reflected in the doctrinal concept of operations when Germany went to war. By 1939 the Wehrmacht had, as a result of a broad rearmament, all the arms envisaged in *Truppenführung*. However, the German army was only partly mechanised. Most soldiers went to war as their fathers had done in 1914.

6 Fall Gelb

Three days after Germany had launched the attack against Poland, the documents containing the British ultimatum were read out to Hitler's inner circle at the Chancellery. After a quiet moment, when Hitler seemed to be unmoved, he turned to his Foreign Minister with an angry look in his eyes and asked "What now"? ²⁵⁷

6.1 German aims, objectives and strategy

There exist a number of theories in several dimensions as to why the Germans attacked in the west, why they won and why they were not deterred. Mearsheimer identifies three schools of thought regarding why the Germans were not deterred.

The first theory is that the Germans attacked because they enjoyed an overwhelming military superiority. "Naturally enough, this high-speed type of warfare demands certain specialized equipment. The Germans saw to it that such equipment was available: we on the other hand, did not, or only in insufficient quantities."²⁵⁸ Moreover, the German economy, as opposed to the allies', was geared for war. The second theory recognises that in quantitative measures the opposing forces were about equal. The overwhelming victory was a result of bad luck on the allied side. Neither Hitler nor his generals foresaw a decisive victory. Hitler's decision to attack was therefore not a rational one. ²⁵⁹

Mearsheimer's third identified theory focuses on the style of warfare. The argument is that the French and British had not learned the proper lessons of the last war. The Germans had and developed Blitzkrieg. This form of warfare was pursued because it did not require an economy geared for war. Moreover, according to Mearsheimer, it strengthens the argument that Hitler had a well-defined plan, or a grand strategy, but with limited objectives. To Mearsheimer's third school one can also add those who claim that Germany was in fact materially inferior to the allies. Then the deliberate design of strategy in accordance with operational and tactical level doctrines as a force multiplier becomes more emphasised.²⁶⁰ Mearsheimer points out there were

²⁵⁷ Frieser, Karl-Heinz, *Blitzkrieg-Legende, Der Westfeldzug 1940*, (München, 1996), 15

²⁵⁸ Bloch, Marc, *Strange Defeat*, (New York, 1999), 51

²⁵⁹ Mearsheimer, *Conventional Deterrence*, 100

²⁶⁰ Messenger, *The Art of Blitzkrieg*, 142

two phases of the German planning process for the attack. During the first period, which lasted from fall 1939 to February 1940, the Germans pursued a limited aim strategy with limited objectives. According to Mearsheimer's definitions the Germans sought to surprise the allies before they could mobilise, minimise clashes, and partially defeat them. The limited objective was to occupy only part of the enemy territory. However, the element of surprise was lost, and a Blitzkrieg-style or a strategy of attrition was at the time not seen as any option. From February 1940 a Blitzkrieg-style attack emerged as an option. The Germans saw it as possible to defeat the allies decisively. However, it is Mearsheimer's opinion that the Germans still had limited objectives even though there was an expectation of a decisive victory.

6.2 Interpretations of Blitzkrieg 1940

Mearsheimer's arguments are contested. It is not the scope of this thesis to venture into German foreign policy and economic preparation prior to the war. However, Overy for example, claims that Hitler had what Mearsheimer would call unlimited objectives, with plans to fight major wars of conquest. But these were to be fought considerably later than 1939/1940. The intention was a large-scale mobilisation of society. Thus the lack of economic preparation and large-scale armament in 1939/1940 was due to the fact that it was out of step with German foreign policy and not necessarily because the Wehrmacht preferred Blitzkrieg-type operations that did not need an economy geared for war.²⁶¹ Kroener supports Overy's view when it comes to management of manpower. He claims that the National Socialist regime did not have in mind a Blitzkrieg plan in 1940. This would have required particularly comprehensive advance personnel planning in order to maintain a reasonable production level in civilian society.²⁶² But this was not the case. Given Overy's argument, given the fact that German armour was about equal in quantity, and given that it is reasonable to interpret the doctrine as not one of a Blitzkrieg-approach, was Blitzkrieg, as Geyer noted just an "avalanche of actions that were sorted out less by design than by success."²⁶³

Corum is of the opinion that the German military leadership excelled at the tactical and operational level of war, but "they demonstrated a poor grasp of strategy."²⁶⁴ Others propose that Blitzkrieg lacked operational coherence and was nothing more than an expression of tactical excellence.²⁶⁵ It was the result of tactically minded technocrats who had never learned to

²⁶¹ Overy, Richard J., *War and Economy in the Third Reich*, (Oxford, 1994), 234

²⁶² Kroener, Bernhard R., *Squaring the Circle. Blitzkrieg Strategy and Manpower Shortage, 1939-1942*, in Deist, Wilhelm, *The German Military in the Age of Total War*, (New Hampshire, 1985), 286

²⁶³ Geyer, German Strategy, in Paret., *Makers*, 525

²⁶⁴ Condell, Zabecki, *Truppenführung*, XI

²⁶⁵ Naveh, *In Pursuit*, 105

evaluate operations within the context of a coherent strategy. These technocrats light-heartedly followed the orders of their superiors.²⁶⁶

Some historians, for example Naveh, reject *Fall Gelb* as a case of Blitzkrieg. Naveh's argument is founded on the assumption that Manstein, the conceiver of the plan that was adopted for the offensive, did not belong to the hard nucleus of technocrats. Naveh also excludes the German offensive as an expression of operational art. However, he argues that Manstein, through his plan, expressed operational thinking at its best.²⁶⁷ How then can *Fall Gelb* not be operational art? Basing himself on Guderian's book *Panzer Leader*, Naveh argues that the OKH version of the Manstein Plan did not specify what should be the operational objective after the crossing of the Meuse. Guderian was under the impression that whether the operational objective was Paris or the Channel was undecided.²⁶⁸ According to Naveh, the offensive turned into a sort of encirclement because of the limited dimensions of the operational space and because the allied forces advanced into Flanders and Belgium.²⁶⁹ Naveh suggests that the Wehrmacht focused solely on the technical aspects of the breakthrough.²⁷⁰

Van Creveld sees the paradox of what he calls German manoeuvre warfare during this period. Creveld claims that Blitzkrieg as a doctrine was only just being born. *Fall Gelb* therefore "developed as a mixture of the old *operativ* doctrine and the new system of independent, deep-striking operations by mechanized forces."²⁷¹ This is supported by Wallach, who sees the offensive as a clear expression of the old operational doctrine, the Cannae like *Gesamtschlacht*.²⁷² Macksey claimed that *Fall Gelb* would produce "an annihilating encirclement such as the elder Moltke used to demand, and that the younger Moltke had sought and missed [...]."²⁷³

²⁶⁶ Geyer, German Strategy, in Paret., *Makers*, 537. Creveld, Martin van, *The Training of Officers*, (New York, 1990), 101. Creveld notes that the greatest strength of the German system for teaching officers was the "single-minded concentration on the conduct of war on the operational level." This was also its greatest shortcoming. It did not offer sufficient instruction in the non-military aspects of war, such as politics and economics.

²⁶⁷ Naveh, *In Pursuit*, 125-126. Naveh relies on Guderian in this case, but he also accuses Guderian together with Liddell Hart for historical manipulation of the Blitzkrieg phenomenon.

²⁶⁸ Ibid., 109, 156. See also Guderian, Heinz, *Panzer Leader*, (New York, 1952), 90.

²⁶⁹ Ibid., 126

²⁷⁰ Ibid., 155. Naveh bases his assumption on Blumentritt who referred to the plan as the *Sichelschnitt* rather than *Kessel*. Naveh interprets the term "stroke of a sickle" as a penetrating movement. It appears that the German understand the word *Sichelschnitt* as a sweeping movement. See for example Roth, Günther, *Der Feldzugsplan "Fall Gelb" für die deutsche Offensive im Westen, 1940*, in Roth., *Operatives Denken*, 57. Roth compare Manstein's plan to that of a "Drehtür" (Revolving door) and a matador's cloak.

²⁷¹ Creveld, *Air Power and Maneuver Warfare*, 54

²⁷² Wallach, *The Dogma*, 250

²⁷³ Macksey, Kenneth, *Guderian, Creator of the Blitzkrieg*, (New York, 1976), 122

6.3 German Planning

On 27 September, the same day as Warsaw fell, Hitler told his generals of his wish for an attack against the allies. In Hitler's opinion the attack should commence in just a month, since Hitler believed the French and British were not yet prepared for war.²⁷⁴ On 9 October Hitler prepared both a memorandum and a directive for the offensive. The memorandum outlined his reasons for the coming offensive and was presented to the German military leadership.²⁷⁵ The memorandum is of interest because in this, Hitler declares his war aims.

In the memorandum Hitler accused Britain of wanting a weaker Germany in order to maintain a balance of power in Europe defined by Britain. But Germany deserved better. "Das Ziel dieses Kampfes liegt [...] auf der Seite des Gegners in der [...] Vernichtung des Deutschen Reich."²⁷⁶

In order to consolidate and develop the new Germany, the German *Kriegsziel* or *Kriegsobjekt* was the annihilation of their opponents. The German attack was to be mounted with the object of destroying the French army; but in any case it had to create a favourable initial situation. This was a prerequisite for a successful continuation of "Der Brutale Einsatz der Luftwaffe gegen das Herz des britischen Widerstandswilles [...]", in order to gain German dominance in Europe.²⁷⁷

The *Operationsobjekt* was formulated as: "[d]ie Gesamte Führung hat sich bei den bevorstehenden Operationen unentwegt vor Augen zu halten, daß die Vernichtung der französisch-englischen Armee das große Ziel ist."²⁷⁸ The memorandum aims at total war.

However, the directive also outlined an *Operationsobjekt*. As opposed to the memorandum, the object was not the annihilation of the allied forces. The main point was to reduce the allied forces as much as possible in order to protect the industrial heart of Germany and launch further offensives against mainland Britain.²⁷⁹ The generals were given *Aufträge* through a directive that did not correspond to Hitler's *Absicht* in the memorandum. The directive was not "a précis of Hitler's long winded memorandum" as Wallach claims.²⁸⁰

Some of the leading German generals had a strategic vision that made them fear a new German "adventure" in the west. General Ritter von Leeb, the commander of army group C, wrote in his diary on 11 October: "The decision to attack must be preceded by the question, what can such an attack achieve for us? [...] it leads to a war of attrition either before the French fortifications or

²⁷⁴ Shirer, *The Rise and Fall of the Third Reich*, (London, 1961), 640

²⁷⁵ Halder, Franz, *The Halder Diaries*, (Colorado, 1976), 100

²⁷⁶ Jacobsen, Hans-Adolf, *Dokumente zur Vorgeschichte des Westfeldzuges*, (Berlin, 1960), 6

²⁷⁷ Ibid., 19

²⁷⁸ Ibid., 19

²⁷⁹ Ibid., 22

²⁸⁰ Wallach, *The Dogma*, 255

already on Belgian territory. If it is a priori given a limited objective – say, the capture or extension of our bases for aerial and submarine warfare – this limitation will not prevent the war of attrition, and a secure basis for final victory is not [gained] by it either.”²⁸¹

6.3.1 The First Plans

The first plan for the offensive in the west was presented to Hitler on 19 October. The plan proposed a *Schwerpunkt* with a strong right wing through Belgium. It was to be constituted by Army Group B, which also would have the bulk of the Panzer divisions. Hitler was not impressed and stated: “This is the old Schlieffen Plan with the strong right wing along the Atlantic Coast, one does not conduct such an operation unpunished twice.”²⁸² Although the axis on which the offensive was planned seemingly corresponded to that of the Schlieffen *Denkschrift*, it stopped short of the “wheeling of armies” around Paris. The plan appears to be in accordance with directive number 6, but it was also the expression of something imposed by Hitler on Generals who opposed him – “eine ideecarmen Improvisation.”²⁸³ It was a plan of limited objectives and it did not seek a decisive victory over the allied forces.

Did the plan reveal, as Mearsheimer proposes, that the Germans did not believe in a Blitzkrieg-style approach? Halder noted in his diary, that the methods used in the Polish campaign, where the German forces had more or less squeezed the Polish army from three sides, was not the proper method in the coming offensive.²⁸⁴ However, the Panzers had shown their merits, and they would be used extensively in the coming offensive. In his diary on 10 October, he underlined the following passages: “We must not form a massive front. Split up the enemy front! Concentrated attacks against single sectors by a continuous flow of troops from the rear. This enables us to bring to bear our superiority in generalship.”²⁸⁵ Halder’s line of thought might have fitted, at least partly, into some of the existing Blitzkrieg conceptions.

During a meeting on 25 October with his top generals, Hitler asked whether it was possible to shift the *Schwerpunkt* more the south and direct it towards Reims or Amiens. He also envisaged

²⁸¹ Mearsheimer, *Conventional Deterrence*, 106. On 17 October, Brauchitsch also met with Hitler and tried to persuade him not to attack in the west.

²⁸² Frieser, *Blitzkrieg-Legende*, 74. See also Jacobsen, *Dokumente zur Vorgeschichte*, 41-46. The “Aufmarschanweisung” appears to have few similarities with the Schlieffen Plan. However, several authors claim that it was. See for example Messenger, *The Art of Blitzkrieg*, 137 and Goerlitz, *German General Staff*, 362.

²⁸³ Jacobsen, Hans-Adolf, *Fall Gelb, Der Kampf um den deutschen Operationsplan zur Westoffensive 1940*, (Wiesbaden, 1957), 32. See also Frieser, *Blitzkrieg-Legende*, 74. By autumn 1939, some of the Generals of the German Army (Halder included) did plan for a conspiracy against Hitler. Frieser proposes that the first plan for the offensive may have been made deliberately in order to make the prospects of successes on the battlefield less likely.

²⁸⁴ Halder, *Diaries*, 93

²⁸⁵ *Ibid.*, 101. Halder’s underlining.

a smaller thrust towards Liège.²⁸⁶ A thrust towards Amiens would mean that the Germans would aim to defeat a larger portion of the allied forces than was planned in the 19 October version. Hitler's ideas seem to have influenced the new plan that was presented on 29 October. This plan involved two *Schwerpunkte*. Both were in the sector of Army Group B, of which the left *Schwerpunkt* aimed more to the south than the previous plan. This plan, contrary to the first, clearly states that the Germans wanted a breakthrough to the Channel.²⁸⁷ A more daring thrust by Army Group A, although without Panzer divisions, was also recommended.

On 11 November Hitler ordered that Army Group A should be the third *Schwerpunkt*. It was to be spearheaded by armoured and motorised units and attack in the direction of Sedan. Halder noted in his diary on 9 November: "Fuehrer insists that Armd. Divs. must under all circumstances strike in the direction Arlon-Tintigny."²⁸⁸ It is not possible to deduce what Hitler meant with "under all circumstances", but it suggests that Hitler was becoming increasingly determined to put his main thrust through the Ardennes.

On 20 November Hitler issued his directive number 8. This instructed what precautions be taken to enable the main weight of the attack to be shifted from Army Group B to Army Group A. This shift would be ordered should the disposition of enemy forces at any time suggest that Army Group A could achieve greater success.²⁸⁹ The rationale behind this was that German generals were unsure whether the Allies would advance into Belgium at the outset of hostilities, and how deep this advance eventually would be. With the preparatory arrangements for a shift of *Schwerpunkt*, the Germans would gain flexibility and thus be able to choose an encircling attack either from the north or south.²⁹⁰ This arrangement caused some uncertainty. On 20 December 1939, Halder noted: "Strength must be conserved for main effort in [Army Group A]. Has [Army Group A] a double mission?" "Operational intention divergences. Guderian at Sedan will not be strong enough for major operation."²⁹¹

²⁸⁶ Jacobsen, *Fall Gelb*, 39-40. See also Halder, *Diaries*, 113. The diary gives the impression that Hitler was unwilling to stake all on one card, hence different thrusts. For slightly different interpretations, see Doughty, Robert A., *The Breaking Point: Sedan and The Fall of France*, (Connecticut, 1990), 22. According to Doughty, Hitler suggested an offensive through the Ardennes, from where the German forces would turn north to envelop the Belgian fortresses. Doughty does not mention a thrust towards Reims or Amiens. According to Mearsheimer, *Conventional Deterrence*, 114, Hitler wanted to shift the *Schwerpunkt* to south of and direct it towards Amiens.

²⁸⁷ Jacobsen, *Dokumente zur Vorgeschichte*, 47. See also Frieser, *Blitzkrieg-Legende*, 75

²⁸⁸ *Ibid.*, 23. See also Halder, *Diaries*, 123. On 12 November, the 19th Panzer Corps, commanded by Guderian was transferred from Army Group B to Army Group A.

²⁸⁹ *Ibid.*, 23

²⁹⁰ Doughty, *The Breaking Point*, 23

²⁹¹ Halder, *Diaries*, 160. See also Manstein, Erich von, *Lost Victories*, (Chicago, 1958), 109

The German military had been put on standby to attack in the near future off and on since late September 1939. On 10 January, Hitler decided to attack on 17 January, obviously unaware that two very unlucky Luftwaffe officers that had with them documents concerning the plans for the offensive, crash-landed with their plane in Belgium.²⁹² As the Germans were not sure how much of their plans were revealed, the attack was postponed on 13 January until the spring.²⁹³ In light of the events during the evolution of the plan, and the incident on 10 January 1940, the plan was not dramatically changed. The third draft of 30 January was more or less a copy of the plan from 29 October, but with the amendments of Hitler's 11 November directions. This plan went more or less unaltered until 24 February.

The aims and objectives of the memorandum and the directive, and the German anticipation of the coming war's character implies that the Germans never sought to pursue what Mearsheimer call a limited aim strategy. As Umbreit points out, there was not even a strategic concept of how the war was to be decided in Germany's favour, in the event of a successful campaign with a limited objective.²⁹⁴ As for the style of warfare, Halder's 10 October note in the diary and the different plans without any properly formulated end state, reveals a design rather like Ludendorff's Operation Michael. One hacked a hole into the front, and the rest was supposed to come on its own. The only direction was to defeat a major, but otherwise undefined proportion of the enemy forces and to gain territory along the Channel.

6.3.2 The Manstein Plan

During the period from October 1939, General Manstein, who was the chief of staff of Army Group A, had developed his own idea of how the offensive should be executed. What struck Manstein, like Hitler when learning of the first draft, was that it was a repetition of the Schlieffen plan.²⁹⁵

In Manstein's opinion, the limited objectives did not justify the political implications of violating the neutrality of the Low-Countries. Nor did it justify the military stakes involved. Manstein

²⁹² Shirer, *The Rise and Fall of the Third Reich*, 672. On January 17, the Germans learned from the Belgian Foreign Minister that they had a "document of the most extraordinary and serious nature[...]" According to Shirer the documents revealed the complete attack order worked out in every detail. This assumption is shared by a number of authors. See also Jacobsen, *Dokumente zur Vorgeschichte*, 169-179. It shows all the fragmented documents. They reveal that they are mostly concerned with Luftwaffe operations and are far from being a complete plan for an operation of *Fall Gelb*'s magnitude.

²⁹³ Mearsheimer, *Conventional Deterrence*, 121. See also Halder, *Diaries*, 176-181. It seems that OKH was kept in the dark until 18 January on the decision not to attack in the nearest future. On 18 January came the order to OKH that there was no fixed date for the offensive.

²⁹⁴ Umbreit, Hans, *The Battle For Hegemony in Western Europe*, in Maier, Klaus A. et.al., *Germany and the Second World War*, vol. 2, 240

²⁹⁵ Manstein, *Lost Victories*, 98. Manstein admitted later on that the plan was far from being a Schlieffen plan.

feared that the offensive would peter out on the Somme and turn into a war of attrition, a fear he shared with many of the generals. The most potent allied forces were located at the French-Belgian border. An offensive with a strong right wing would then clash with the main enemy forces. "Schwerpunkt werde auf Schwerpunkt treffen."²⁹⁶ The offensive outlined by the OKH would at best give operational advantages. Moreover, Manstein was of the opinion that, if a continuation of the war against Britain were to succeed, Germany would need territory along the entire Channel coast. By shifting the main thrust from Army Group B to Army Group A, the latter would attack where the enemy least expected it.²⁹⁷ Manstein envisaged an offensive where Army Group A was given the bulk of the Panzer divisions. These would advance through the Ardennes Forest in the direction of Sedan. Once a breakthrough was made, the Panzer divisions would cross the Meuse and advance along the Somme River towards the Channel. By doing this allied forces would be caught in a gigantic *Kessel*. Army Group B would be functioning as an anvil and Army Group A as the hammer. "This was the only possible means of destroying the enemy's entire northern wing in Belgium preparatory to winning a final victory in France."²⁹⁸ Between 31 October 1939 and 12 January 1940, Manstein wrote seven memoranda, signed by his superior, Rundstedt, to OKH.²⁹⁹ The memoranda reveal that Manstein also realised that the allies would not necessarily give in after a successful campaign against the allied forces to the north. In most of the documents he warns about the danger of not seeking a decisive victory over the whole French army. What he had in mind, in addition to the French forces by the Belgium border, was the concentration of forces at the Maginot-line. Moreover, Manstein foresaw that the advance towards the Channel would expose the left flank for a French counter-attack. However, it was not in Manstein's mind that the vacuum followed by the advance of the Panzer divisions should be filled with slow moving infantry to guard against flanking attacks. That would tie the speed of the Panzers to that of the foot-mobile infantry. The solution would rather be to use motorised infantry in conjunction with the Panzers to attack French forces on the left flank. The French would then be kept from being able to concentrate for serious attacks, or to form a massive front on the left flank. For this Manstein wanted to use one Army (out of five

²⁹⁶ Frieser, *Blitzkrieg-Legende*, 78-79. See also Manstein, *Lost Victories*, 103. See also 106. Manstein also points out the danger of having most of the German forces fighting a long war in northern France with the Soviet Union at Germany's back.

²⁹⁷ Horne, Alistair, *To Lose a Battle, France 1940*, (London, 1998), 185. According to Horne, the initial shape of Manstein's plan still allocated the *Schwerpunkt* to Army Group B. See Jacobsen, *Dokumente zur Vorgeschichte*, 123-132. Manstein's memorandum of 31 October 1939 confirms this. As will be shown below, the reason for this is that Army Group A took over a larger part of Army Group B's area of responsibility on a later stage in the planning process.

²⁹⁸ Manstein *Lost Victories*, 104.

²⁹⁹ Frieser, *Blitzkrieg-Legende*, 79.

participating in the offensive) to move south in the direction of Reims. This move was also meant to consolidate the pivot point at Sedan so that it could prevent any counter-attack from the Verdun sector.³⁰⁰ Moreover, the area around Sedan was to be the pivot point for a later thrust to the south. This thrust, a *Fall Rot*, was to complete the destruction of the remaining French army. According to Frieser, Halder's view on the memoranda and Manstein's plan was that it was an egocentric attempt on behalf of Army Group A. It wanted to play a more prominent role in the coming campaign.³⁰¹ OKH's neglect of Manstein's plan is often described as a conflict between two personalities, Halder the bureaucratic disciplinarian against the intuitive and emotional Manstein. According to Leach, Halder's dislike of Manstein became nourished when the latter reminded him about Moltke's dictum that errors in the initial deployment cannot be corrected in the course of the operation. The comment was directed at the OKH plan, which opted for a shift of the *Schwerpunkt* to whichever army group that achieved the greatest initial success. Manstein's view then is contrary to modern manoeuvre warfare doctrines. As we have seen the doctrines opt for shifts of the main effort very much as that envisaged in the OKH plan. Nevertheless, the assumption that there was a conflict between Manstein and Halder, does not take into account that Halder probably never was satisfied with this plan. After all, Halder worked under the auspices of Hitler and was subject to his diverging ideas. Moreover, initially he was against a campaign in the West. Halder's failure to respond positively to the proposed plan must also be put in the context of the fact that the offensive was never more than two weeks away.³⁰²

In Halder's diary, there are two references to Manstein's memoranda. The first reference is made on 19 December, and Halder noted that he received an "idiotic proposal by Agp.A."³⁰³ His negative attitude does not seem to be very deep rooted. On 27 December he referred to the plan only in neutral terms. The reference concerned a war game that examined Manstein's plan.³⁰⁴ The war game revealed the worrying prospects of a French counter attack on the left flank of Army Group A.³⁰⁵ But after the pressure of a near imminent offensive had been taken off during January, Halder seems to have become more open to other ideas. On 7 February Halder attended a sand table exercise that was held by Army Group A. According to Manstein, Halder was now

³⁰⁰ Ibid., 89-91

³⁰¹ Ibid., 79

³⁰² Leach, Barry A. *Halder*, in Barnett, Cornelli, ed., *Hitler's Generals*, (London, 1989), 109

³⁰³ Halder *Diaries*, 160

³⁰⁴ Ibid., 163

³⁰⁵ Doughty, *The Breaking Point*, 25

beginning to realise the validity of the plan.³⁰⁶ A new exercise on 14 February made him more interested and perhaps convinced him of the basic layout.³⁰⁷

Did Hitler know of the plan? And if so, when did he become aware of it? Did he respond positively? There are several versions of this story. As we have seen, in late October 1939, Hitler came up with the question regarding an armoured thrust through the Ardennes. According to Mearsheimer, Hitler's adjutant Schmudt visited Army Group A in late December. There he was presented Manstein's plan through Blumentritt, a supporter of Manstein. Schmudt requested a copy and shortly thereafter presented it to Hitler. Schmudt called Blumentritt and told him that the Fuehrer had read it with great interest and liked it for its audacity.³⁰⁸ Manstein recalls that Schmudt got a copy of a memorandum he wrote concerning his plan, but fails to give a date for it. He does not mention any positive phone calls about either.³⁰⁹ As Blumentritt was a staunch supporter of the plan and Manstein, he would surely have mentioned such a telephone call to his superior.

According to Frieser, Schmudt's visit occurred in late January.³¹⁰ When he returned from the visit he excitedly told one of Hitler's other adjutants, Major Engel, that Manstein had presented views that corresponded with Hitler's on the *Schwerpunkt* issue. Engel noted in his diary that Schmudt informed Hitler on 5 February. Hitler showed interest in the plan despite his reservations about Manstein. Schmudt then proposed a consultation between Hitler and Manstein. Hitler was positive to such an idea but wanted to keep Halder unaware of the meeting.³¹¹ In the mean time Halder was working on personnel rotation issues. Apparently in order to get rid of the troublesome Manstein, Halder wanted him replaced.³¹² Manstein was assigned to command a reserve corps in Prussia, far from the coming events, on 27 January.

According to Frieser, it was in the wake of this rotation that Schmudt, came up with the *konspirativen* idea of arranging a luncheon with the newly appointed corps commanders,

³⁰⁶ Manstein, *Lost Victories*, 119. See also Halder, *Diaries*, 213-215. The diary reveals that Halder saw possibilities in the plan.

³⁰⁷ Halder, *Diaries*, 226-227.

³⁰⁸ Mearsheimer *Conventional Deterrence*, 124

³⁰⁹ Manstein, *Lost Victories*, 111

³¹⁰ Frieser, *Blitzkrieg-Legende*, 80

³¹¹ Engel, Gerhardt, *Heeresadjutant bei Hitler 1938-1943, Aufzeichnungen des Majors Engel*, (Stuttgart, 1974), 73. According to Powaski, Ronald E., *Lightning War, Blitzkrieg in the West, 1940*, (New Jersey, 2003), 50, it was Hitler that demanded a consultation with Manstein without arousing Halder's suspicion.

³¹² Frieser, *Blitzkrieg-Legende*, 79. See also Halder, *Diaries*, 191. The first and only reference to this in Halder's diary is on 22 January 1940. With the state of readiness for an attack on France that was imposed on the Wehrmacht during the previous months, it seems a bit strange that he would replace him. That he thought of this after 18 January, when he became aware of the postponement of the attack until spring 1940, seems to be more realistic. See Manstein, *Lost Victories*, 120. Manstein thought that his promotion was to get rid of him.

obviously realising that Manstein was blocked from presenting his ideas to Hitler.³¹³ According to Engel's diary, the event seems to have been less dramatic and conspirational. The luncheon took place on 17 February. During it Hitler and Manstein had a private meeting, where the former was presented with the plan. Manstein noted that Hitler was surprisingly quick to grasp the points, indicating that he had been informed in advance.³¹⁴ Hitler had already decided the issue. On 13 February Hitler told Jodl of his decision to commit the mass of his armour to the breakthrough, where the enemy would least expect it, at Sedan.³¹⁵ Jodl passed on to OKH the task of making a plan in accordance with Hitler's decision.³¹⁶ On 18 February Hitler summoned Halder to the Chancellery. The chief of the General Staff brought with him a new version of *Fall Gelb*, not unlike Manstein's original plan. The same day Halder noted in his diary:

"Original plan was to break through the enemy front between Liège and the Maginot Line. [...]. The central feature of that plan was to concentrate the main weight in the south and to use Antwerp instead of Liège as the pivot of the great wheeling movement. Now we have reverted to the original scheme."³¹⁷— At least for the record.

6.3.3 The adopted plan

Manstein's plan did not survive unaltered. In fact, in the new compromise with Hitler, the important prerequisite for the second phase to the south was taken out. The lack of a *Fall Rot*, which would have given directions on the total annihilation of all French forces, and other changes made this into a new plan.

In Manstein's discussions with Guderian during the autumn of 1939 he learned that Guderian wanted every Panzer for the operation. Manstein thought such a request would only nourish the suspicion that Army Group A was acting selfishly. Manstein reasoned that, if his ideas about a main thrust to the south were accepted, the distribution and concentration of forces would follow. Guderian played his part. Halder noted during the sand table exercise on 14 February that Guderian seemed to have lost confidence in success.³¹⁸ He would need more armour. At best he

³¹³ Frieser, *Blitzkrieg-Legende*, 81

³¹⁴ Engel, *Heeresadjutant*, 75. After the meeting Hitler said that Manstein was obviously an especially gifted man with a thorough grasp of operational matters, "but I do not trust him." See also Powaski, *Lightning War*, 50. Hitler suspected that Manstein was part Jewish.

³¹⁵ Mearsheimer, *Conventional Deterrence*, 123. See also Warlimont, Walter, *Inside Hitler's Headquarters*, (Novato, no date), 593

³¹⁶ Frieser, *Blitzkrieg-Legende*, 81. See also Mearsheimer, *Conventional Deterrence*, 123. On 13 February, Jodl had a meeting with two officers from OKH where he detailed them to do a study based on Hitler's recent decision. Halder, *Diaries*, 225-226. Halder have made no mention of it in his diary.

³¹⁷ Halder, *Diaries*, 230-231

³¹⁸ *Ibid.*, 227

wished for all Panzer divisions to be concentrated in the Sedan sector. Manstein's meeting with Hitler, revealed that the concentration of Panzers was a *conditio sine qua non*.³¹⁹

As it turned out, seven of the ten Panzer divisions were attached to Army Group A. The last version of the old plan had distributed the Panzer divisions with six to Army Group B, and two to Army Group A. But the change in the new plan was not as radical as it appears. The old plan opted for three *Schwerpunkte*, of which two were formed by Army Group B. Both had three panzer divisions each. The new plan expanded the area of responsibility for Army Group A and reduced Army Group B's accordingly. Had Army Group A had the same area of responsibility through the whole planning process, the number of Panzer divisions would have been increased from five to seven. Hitler did not want to give all the armoured units to Army Group A. Too weak a northern thrust would make the allies realise it was not their main thrust, especially given the reputation the German Panzers had earned in Poland. Moreover, if the allies realised that the Germans were not attacking with the support of armour, they might be tempted to let the Belgians do most of the fighting for them. Thus, the allies would be able to manoeuvre in order to engage the oncoming thrust from the south.³²⁰

The noteworthy change in the operational concept was that the southernmost *Schwerpunkt* increased its number of Panzer divisions from two to five and that these were organised into a Panzer group consisting of two Panzer corps. The idea of having a fully motorised Panzer group with all arms present in order to conduct independent operations had no equivalent among the French and British. They continued to organise their armour into divisions and brigades. This meant that what we would call the operational level could conduct its operations within a different perception of the time factor than that of the allied forces. However, a prerequisite for this had to be that it would be treated as an operational level unit independent from the pure infantry armies. The creation of a Panzer group was, as Frieser points out, a controversial experiment.³²¹ The chain of command between the Panzer Group, the infantry armies and Army group A was also a compromise that would cause some friction during the operation.

One other important aspect of the planning of *Fall Gelb* concerns the time factor and the controversy over open flanks. Guderian wanted to push his mobile forces towards the Channel without any cover on the flanks. Halder wanted to wait until he had enough forces in the Sedan area.³²² This was contrary to Manstein's original idea. It would lead to a slow advance, with

³¹⁹ Frieser, *Blitzkrieg-Legende*, 87

³²⁰ Powaski, *Lightning War*, 52-53

³²¹ Frieser, *Blitzkrieg-Legende*, 117

³²² Halder, *Diaries*, 74

infantry moving like pearls on a string behind the mobile units. Manstein's original plan opted for a mobile flank protection that sought to attack French formations before they could concentrate and become a threat. However, this idea, *Aufrollen*, would have led to a weakening of the strength and momentum of the *Schwerpunkt*. Apparently Halder recognised that the German Army was only partly mechanised, and that there were in fact considerable losses of vehicles during the Polish campaign. Some units were down to 50% of their organic transport strength, and it took some considerable efforts and improvisation to improve the situation. Although the overall operational design of the original Manstein plan was kept, it was a new plan. It did not contain a *Fall Rot*, which Manstein had envisaged. There were fewer Panzer divisions and more foot mobile infantry for protection of the southern flank. For Army Group A however, the *Auftrag* given on 24 February was:

“Auftrag der Heeresgruppe A ist, unter Deckung der linken Flanke des Gesamtangriffs gegen feindl. Einwirkung aus dem geschützten Bereich um Metz und Verdun, möglichst rasch den Übergang über die Maas zwischen Dinant und Sedan (beide einschl.) zu erzwingen, um weiterhin unter Abdeckend der Flanken möglichst rasch und möglichst stark im Rücken der nordfranzösischen Grenz-befestigungszone in Richtung auf die Somme-Mündung durchzustoßen.”

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6.3.4 Guderian meets Hitler

There seems to have been a special relationship between Hitler and Guderian. Engel, Hitler's adjutant noted in his diary that Guderian on 22 November had called at Hitler's office.³²⁴ Guderian wanted to meet Hitler in person in the wake of reports to Hitler from OKH that there were instances of insubordination among German soldiers. According to Engel, Guderian had informed Hitler that the status of the Army was not as bad as the report stated.³²⁵ The day after Hitler delivered a speech that in Guderian's opinion was designed to strengthen the political attitude of the officer corps. In fact Hitler's speech was the expression of a fundamental distrust between Hitler and the top generals. This distrust does not seem to have included Guderian, at least for the moment.³²⁶

³²³ Jacobson, *Dokumente zur Vorgeschichte*, 66. See also: Schramm, Percy E., *Kriegstagebuch des Oberkommandos der Wehrmacht 1940-1941 Teilband 1*, (Bonn, 1963), 178 E.

³²⁴ Engel, *Heeresadjutant*, 68

³²⁵ Halder, *Diaries*, 120. Brauchitsch deliberately exaggerated what seemed to have been slackness and bad behaviour at the front as a result of the prolonged alert, and that it was done to influence Hitler's decision to go to war.

³²⁶ Guderian, *Panzer Leader*, 85. Besides discussing the plan for a Panzer thrust through the Ardennes, Guderian and Manstein discussed what they could do about the disloyalty of the conservative generals. Although Guderian seems to be “canonised” by some manoeuvrists, he is at least very honest about his relationship with Hitler.

As we have seen, the new plan was adopted on 24 February. In mid March Hitler met with Guderian. During the meeting the two discussed establishing the bridgehead at the Meuse. Hitler then turned to the question on the further progress of the operation. Guderian answered: "Unless I receive orders to the contrary, I intend on the next day to continue my advance westwards. The supreme leadership must decide whether my objective is to be Amiens or Paris."³²⁷ Then Hitler nodded and said nothing more.

On March 17 Hitler held a conference for his top generals. Halder noted: "Decision reserved on further moves after the crossing of the Meuse. [...]. He plays with the idea that a mild bleeding of the enemy forces will suffice to break their will to resist."³²⁸ Why did Hitler ask Guderian what he would do after the breakout at Sedan? Why did Guderian come up with the alternatives Paris or the English Channel? What did Hitler mean by reserving the decision on further moves after the crossing of the Meuse? Had he, as Naveh proposes, not decided on whether it was going to be Paris or the Channel after all?

What is clear is that Hitler still was not convinced of the feasibility of the plan. He wanted more plans to be worked out. Throughout February and March different plans with different objectives, involving offensives conducted by Army Group C and Italian forces were discussed.³²⁹ Apparently nothing came out of these. However, the discrepancies between the memorandum and the directive, the reservation on further moves, the lack of a *Fall Rot* in the adopted plan, and the different contingency plans made out in March, indicate that Hitler had not decided whether his objectives were limited or unlimited. Mearsheimer's suggestion that the Germans pursued limited objectives may therefore not be regarded as the final conclusion.

6.4 German execution

It is not within the scope of this thesis to cover the movements and actions of either the allied or the German armed forces. This part will be concerned with Army Group A's, Kleist's and Guderian's conduct of operations to the point where it was obvious where the *Schwerpunkt* was directed. That is a story that has been presented as one of some considerable friction and does not necessarily reflect Van Creveld's view:

"[T]he German Army's system of organization reflected a deliberate choice, a conscious determination to maintain at all costs that which was believed to be decisive to the conduct of

³²⁷ Ibid., 90

³²⁸ Halder, *Diaries*, 277. See also Taylor, Telford, *The March of Conquest, The German Victories in Western Europe 1940*, (London, 1959). Taylor dates the meeting between Guderian and Hitler to 15 March, and relates Halder's note on further moves after the breakthrough to this meeting.

³²⁹ Jacobsen, *Fall Gelb*, 121-126. See also Halder's diaries through March 1940.

war: mutual trust, a willingness to assume responsibility, and the right and duty of subordinate commanders at all levels to make independent decisions and carry them out.”³³⁰ At least at the highest command levels Geyer contests Crevelde’s statement. “Rather than enhancing co-operation and creating a smooth functioning machine for mechanised warfare, Blitzkrieg pitted staffs and commanders against each other in the quest for optimal performance in the planning and conducting of war.”³³¹

6.4.1 Through the Ardennes

Some 40 000 vehicles of all kinds and 140 000 men comprised the main thrust through the Ardennes. Guderian, commanding three Panzer divisions could now put to test the theories he presented in his book *Achtung Panzer*. His buzzword was “klotzen nicht kleckern”. He wanted his forces to reach the Meuse on the third day, and cross it on the fourth.³³² It took two days to reach the River Meuse. However, the dash through the Ardennes could have ended in catastrophe. Already on the first day, General Reinhardt noted that the whole plan fell apart like a house of cards.³³³ Units became mixed and during the three days, the higher echelon staffs had no clear picture of which unit was where. On the third day the largest traffic jam ever in European history was a fact.³³⁴

There were several factors leading to the chaos. First, the plan had a number of faults. Three weeks before the faults had been revealed during an exercise. But obviously not enough was done to correct them. In many places the Belgians had deliberately taken away road signs as a counter measure, and there were also instances where units were ordered to attack what were believed to be larger enemy formations. This led to a deviation from the pre-planned route, with a subsequent mixing up. However, one of the most influential factors seems to have been initiative among junior commanders. There had been reports on lack of initiative in Poland. This was suddenly turned around. Guderian’s slogan “in three days on the Meuse” made the units ignore the traffic control measures and move forward as rapid as possible.

On 11 May, Kleist sent out a message to his subordinate commanders. It stated that the problems were caused primarily by independent decisions being made by lower level leaders. Further breaches of the traffic control measures would be punished by death.³³⁵ But perhaps, as Frieser points out, it was only initiatives from the junior leadership that could have saved the thrust

³³⁰ Crevelde, *Fighting Power*, 165

³³¹ Geyer, German Strategy, in Paret, *Makers*, 586

³³² Frieser, *Blitzkrieg-Legende*, 129

³³³ *Ibid.*, 130

³³⁴ *Ibid.*, 135. On one of the axis, the queue was 250 km.

towards the Meuse. In his opinion it was the reactionary leadership of Army Group A, those who did not understand the nature of armoured warfare who were to blame. Accordingly, they tried to direct and to manage the queues instead of letting them have their natural flow.³³⁶ A wedge was driven between the proactive Panzer leaders and the old school of the traditional arms. Frieser states that this distrust was one of the main reasons why *Fall Gelb* during phases resembled "eine freien Operation." Was it *Auftragstaktik* or just common objective that became the factor of success?

Although there was chaos in the Ardennes, the advance was more rapid than the pessimists in OKH had anticipated. According to General Blumentritt, it "was not really an operation, in the tactical sense, but an approach march."³³⁷ What seems to have saved the Germans was the almost total absence of allied aircraft. The diaries of OKH and Army Group A noted that the enemy air force was astoundingly cautious.³³⁸ The French Air Force committed only a fraction of their air assets and had fallen into the trap. They believed that the German main thrust was to the north and deployed their air assets accordingly.³³⁹ The approach march also revealed that the Germans and the French operated in totally different time dimensions. The French had assessed that a potential German thrust through the Ardennes would take some 15 days, five days longer than Halder believed.³⁴⁰

6.4.2 Crossing the Meuse

On 12 May, Guderian and Kleist also had an argument on where to cross the Meuse. Kleist wanted Guderian to cross 13 km west of Sedan in order to rupture the flanks that tied the French 2nd and 9th Armies together. Guderian wanted the crossing to take place at Sedan, both because that was what he had planned for, and because he wanted to take out French artillery threatening the flank. Guderian got his way, but Kleist wanted him to cross the Meuse on 13 May at 1600 hours, in order to keep pressure up on the French. Guderian, who at this time only had two of his

³³⁵ Doughty, *The Breaking Point*, 36

³³⁶ Frieser, *Blitzkrieg-Legende*, 135-136. Whether the initiative among junior commanders could be ascribed to the tablets of Pervitin (amphetamine) that was issued is not sure. One Panzer division was issued 20 000 tablets of Pervitin to be able to endure the requirement of staying awake during three nights. Most of them stayed awake longer than that. The behaviour contrasted with what the Wehrmacht experienced in Poland. See also Halder, *Diaries*, 97. During the campaign in Poland, one of the General staff's "directed telescopes" reported back to the OKH that officers were sitting around instead of doing something when there was traffic jam. The infantry was not attacking vigorously enough and good opportunities were being missed.

³³⁷ Shirer, William L., *The Collapse of the Third Republic*, (London, 1970), 610

³³⁸ Jacobsen, *Dokumente zum Westfeldzug 1940*, (Berlin, 1956), 9-19

³³⁹ Shirer, *The Collapse of the Third Republic*, 596. See also Doughty, *The Breaking Point*, 267

³⁴⁰ Ibid., 599-600, 607. At least at the beginning of the campaign the French generals thought they had plenty of time. Even after the war, Gamelin said: "At the echelon where I was, of what use would a radio transmitter have been?"

three Panzer divisions in the area, wanted to wait for the arrival of the last division and the artillery following in its trail. At this point Kleist did not compromise.³⁴¹

In early May Guderian had planned the use of air assets together with the commander of the 2nd Fliegerkorps, a subordinate unit to the 3rd Luftflotte for the crossing. It was an elaborate plan, which opted for a several-hours-long continuous bombardment of the French positions on the western side of the Meuse. But according to Frieser, Kleist had co-ordinated the use of air to ground missions with the commander of the 3rd Luftflotte. Kleist's plan opted for a concentrated bombardment that was supposed to last for twenty minutes. However, the diary of Army Group A, reveals that the difference of opinion between Guderian and Kleist initially was not that great. According to Army Group A's diary, the 3rd Luftflotte was supposed to start preparatory attacks at 0800 hours. The attacks were to be intensified and reach its peak between 1400 and 1600 hours. But during the evening of 12 May, the commander of the 3rd Luftflotte informed that his units would not be ready to attack from 0800 hours. The attack had to be concentrated between 1400 and 1600.³⁴²

However, Kleist's order to attack before Guderian felt ready meant that new orders had to be given. There was insufficient time for both the army and air force staffs to write and disseminate the necessary complex written orders for the river crossing. A staff officer recognised that the present situation coincided closely with that envisaged in the war games that were conducted before the invasion. By changing the hours in these plans Guderian's Panzer Corps would use elaborate written formal orders after all.³⁴³

As it turned out Guderian got his way. But this was not because he disobeyed. According to Frieser, the Commander of the 2nd Fliegerkorps later said that, when his superior, the commander of the 3rd Luftflotte, approached him to co-ordinate the change of plans, he ignored it. He had come too late, and the change would lead to confusion. Guderian himself seems to have been unaware of what had happened.³⁴⁴ The episodes reveal that the commander of the 3rd Luftflotte probably had no clear picture of the tasks of his subordinate unit. This was a consequence of a lack of co-ordination among the officers. Kleist, who is regarded as the more conservative, was at this stage more aggressive and was more preoccupied with the speed of the breakthrough at the expense of applying firepower to achieve it, than Guderian was. Guderian wanted all three

³⁴¹ Frieser, *Blitzkrieg-Legende*, 188

³⁴² Jacobsen, *Dokumente zum Westfeldzug*, 29

³⁴³ Guderian, *Panzer Leader*, 101. See also Frieser, *Blitzkrieg-Legende*, 191 and Macksey, *Guderian*, 131.

³⁴⁴ Frieser, *Blitzkrieg-Legende*, 189. See also Guderian, *Panzer Leader*, 101-102 and Jacobsen, *Dokumente zum Westfeldzug*, 24.

Panzer divisions on the stage together with the corps artillery and an 8-hour long bombardment. When it was not possible with a long bombardment, Kleist would rather keep up the speed. Nevertheless, as it turned out, it was the infantry and Luftwaffe that successfully achieved the break in and partly also the breakthrough. Guderian's first armoured vehicle crossed the Meuse after the infantry had secured a bridgehead on May 14.³⁴⁵

Once over the Meuse German initiative reached new heights.³⁴⁶ Accordingly Guderian acted on his own intuition. "I never received any further orders as to what I was to do once the bridgehead over the Meuse was captured. All my decisions until I reached the Atlantic seaboard at Abbeville were taken by me and me alone."³⁴⁷ Did Guderian not receive any orders once he got his 19th Panzer Corps over the Meuse? Did he use, as Lind claims the tactical event – the crossing of the Meuse – strategically, and decided what tactical actions to take – where to fight and whether to fight – on a strategic basis? Was he directing his *Schwerpunkt* directly at the allied strategic centre of gravity?

6.4.3 The Accordion

On 14 May, Guderian's Panzer Corps was still crossing the Meuse. During the early morning the French had launched a counterattack with armoured units that threatened the southern flank of the German bridgehead. The counterattack petered out in the early afternoon, but the French were still in possession of key terrain features around Stonne. Aerial reconnaissance also reported on new formations of French armour concentrating in the area of the exposed left flank.³⁴⁸ The story is at this point a bit unclear. Frieser, basing himself on documents from Guderian's Panzer corps claims that Guderian at 1400 hours on 14 May ordered his 1st and 2nd Panzer divisions to turn towards the west in the direction of Rethel. Later in Frieser's work it appears that Guderian made this decision as early as 2200 hours on 13 May.³⁴⁹ As we shall see, Guderian's decision might not have been that independent as many claim. Nevertheless, with 1st and 2nd Panzer division advancing towards the west on 14 May, it was only the battered Grossdeutschland infantry regiment, and parts of his 10th Panzer Division that held the flank. At 1830 hours Kleist approved Guderian's order, but at 2200 hours, Kleist intervened and

³⁴⁵ Ibid., 215

³⁴⁶ Deighton, Len, *Blitzkrieg*, (New Jersey, 2000), 214. Guderian was eager to get his tanks over the Meuse. So for example was Rommel. When he realised that he had no bridging equipment at hand for his division, he simply required it from the neighbouring 5th division. The division commander protested of course. Rommel later complained that the 5th Panzer division could not keep up with the advance of his own unit. See also Frieser, *Blitzkrieg-Legende*, 289

³⁴⁷ Guderian, *Panzer Leader*, 90

³⁴⁸ Macksey, *Guderian*, 134

³⁴⁹ Frieser, *Blitzkrieg-Legende*, 242, 316

demanded the 1st and 2nd Panzer divisions to reach a line short of the one previously decided.³⁵⁰ After a heated argument Kleist agreed to let Guderian continue his advance towards Rethel.

Guderian's objective was to rupture the flanks that tied the French 2nd and 9th Armies together. Creating a wedge towards Rethel would complete this. But once he reached the town he was in fact no more than 100 miles from Paris. Did Guderian really think that Rethel was the point from where a decision to head either towards the Channel or Paris could be made? Had Guderian, as Lind and Deighton claim, made a decision that was of "such vital importance that it was more a strategic than a tactical one"?³⁵¹ Could all the ambiguities prior to the operation prove Naveh right in that the Germans, or at least Hitler, really had not decided on whether to advance towards Paris or the Channel?

According to Frieser, relying on Blumentritt's study, the Panzer divisions were to keep their positions at the bridgehead until the infantry divisions that followed secured it. Not until then was the armour to break out of the area round Sedan. Hitler's statement that "Decision reserved on further moves after the crossing of the Meuse" was because he feared open flanks.³⁵² But the flanks would be of importance whether he had in mind either Paris or Amiens. The war diaries of Army Group A reveals a story that suggest another interpretation of Guderian's role.

On 13 May, the diary of Army Group A states an awareness of the slow progress of the Panzer divisions." Ein Überschreiten der Maas während der Nacht [12-13 May] ist nicht geglückt."³⁵³ Later that night Kleist reported on the progress to Army Group A.

Doughty, basing himself on the report from Kleist's headquarters, claims that "Kleist confidently reported to Army group A that all three [of Guderian's Panzer division's] had crossed the Meuse River and that on the 14th stronger forces would be pushed across the Ardennes Canal."³⁵⁴ Thus Guderian's superiors did not understand how vulnerable the bridgehead was. However, because of the situation during the morning on 13 May, Rundstedt decided to travel to Kleist's headquarters at 1400 hours. This means that the commander of Army Group A was in a position to monitor the progress of Kleist's units during the evening on 13 May. Were both Kleist and Rundstedt wrongly informed?

According to Doughty, Kleist's report was transmitted to Army Group A at 2040 hours on 13 May. However, this is not reflected in the diary of Army Group A. In the diary it is stated that

³⁵⁰ Horne, *To Loose a Battle*, 389. Frieser, *Blitzkrieg-Legende*, 316

³⁵¹ Deighton, *Blitzkrieg*, 230. See also Lind, *Maneuver Warfare Handbook*, 24

³⁵² Frieser, *Blitzkrieg-Legende*, 240

³⁵³ Jacobsen, *Dokumente zum Westfeldzug*, 23

Lieutenant Colonel Tresckow, who was with Rundstedt, at 1930 hours, sent the report from Kleist's headquarters to Army Group A. What the headquarters of Army Group A received was not a statement that all the Panzer divisions had crossed. It stated that the 1st and 10th Panzer divisions had started crossing, but that the 2nd Panzer division still was at the northern bank of the river.³⁵⁵ Moreover, because of the situation, Rundstedt decided to stay in Kleist's position until next morning.³⁵⁶

The report from Gruppe von Kleist also reveals the *Absicht* for 14 May. It was to broaden the bridgehead, and with emphasis on speed, break out and advance towards the line Rethel-Montcornet-Hirson. Rundstedt supported this intention. The intention stated the maximum objective to reach in geographic terms. The town of Rethel was on his extreme left. No further progress was intended on 14 May. During the night, Guderian's Panzer corps had only made slow progress. On the morning on 14 May he had only managed to establish a small bridgehead and his units on the left side of the river were advancing towards Chehery. Army Group A's diary states that Rundstedt had conversations with Kleist and Guderian during the morning hours. We may therefore assume that Rundstedt was correctly informed about the progress. During the conversations, the commander of Army Group A stressed the importance of as fast as possible winning terrain to the west, "auch in operativer Hinsicht".³⁵⁷ This means that Guderian, when he on 13 May at 2200 hours decided to advance towards Rethel and when he on 14 May at 1400 hours gave orders to his 1st and 2nd Panzer divisions to advance towards Rethel, acted in accordance with his superiors' *Absicht* for 14 May.³⁵⁸ The late entries of the diary on 14 May also state that Guderian "im Sinne der Hinweise des O.B. der Heeresgruppe Kräfte auf das Westufer des Kanals zu verschieben. [...] *Absicht Gruppe von Kleist*: Weiter in westlicher Richtung vorstossen."³⁵⁹

However, Rundstedt also ordered Gruppe von Kleist temporarily under the command of 12th Army. It was necessary "die Kampfhandlungen der Gruppe von Kleist und der 12. Armee in einen gewissen Einklang miteinander zu bringen[.]"³⁶⁰ The order for the 12th Army this day was to leave the bridgehead and as fast as possible advance towards west and reach the line Hirson-Montcornet. This line is well north of Rethel. Unless Guderian was tasked to *Aufrollen*, his

³⁵⁴ Doughty, *The Breaking Point*, 221

³⁵⁵ Jacobsen, *Dokumente zum Westfeldzug*, 24. The last entry in OKH's diary on 13 May says that the 2nd Panzer division had crossed the Meuse. It says nothing about the two other divisions.

³⁵⁶ *Ibid.*, 24

³⁵⁷ *Ibid.*, 28

³⁵⁸ Frieser, *Blitzkrieg-Legende*, 316

³⁵⁹ Jacobsen, *Dokumente zum Westfeldzug*, 29

³⁶⁰ *Ibid.*, 29

orders to his corps with the intention to reach Rethel on 15 May, implies that he was going to deviate from the *Schwerpunkt*.

On 14 May Halder's diary states that "Gruppe Kleist in massive formation must drive toward the sea at St. Omer [...]"³⁶¹ This means that OKH did not have any serious concerns about the situation of the southern flank, and that they intended to follow the plan of 24 February. The diary of Army Group A also reveals that they saw the French as fighting bravely, "aber ohne Zusammenheng".³⁶² There was no French *Schwerpunkt*.

According to Doughty, Kleist wanted to halt at a line short of that stated in the intentions of Army Group A, because they wanted to wait until the follow-on infantry could reinforce the bridgehead.³⁶³ In that case it appears that it was Kleist that acted contrary to Rundstedt's intention. After Kleist and Guderian had had their heated debate, Guderian called and complained about "faint-hearted higher headquarters."³⁶⁴ Accordingly, Doughty's conclusion is that Guderian was thinking in far broader and deeper terms than his conservative superiors, who did not know a great deal about the situation of Guderian's corps. That might have been the case. Had Guderian spent less time on the front line, he might have had a good overview himself in order to report his situation. If there were any uncertainties about the situation, that could just as well have been a result of a confused command arrangement, where an operational unit, Panzer Gruppe Kleist, the "umstrittenes operatives Experiment", suddenly was put under a new command. At least Rundstedt was thinking in just as broad terms as Guderian.

During the night on 15 May, OKH gave directions that 12th Army was to turn its front to the south. Rundstedt explicitly stated that he could not take responsibility for this as it now was heading west. This would lead to hopeless chaos. OKH did not have any problems with accepting Rundstedt's argument.³⁶⁵ Rundstedt now gave 12th Army the task to, "ohne Rücksicht

³⁶¹ Ibid., 27. See also 114

³⁶² Ibid., 29

³⁶³ Doughty, *The Breaking Point*, 222-223. See Frieser, *Blitzkrieg-Legende*, 242. According to Frieser, basing himself on documents from Guderian's corps headquarters and the 1st Panzer division, Guderian ordered the 1st and 2nd Panzer divisions to advance in the direction of Rethel on 14 May at 1400 hours. According to Doughty, basing himself on documents from the 2nd Panzer division, this division got orders to advance in this direction at 0300 hours on 15 May, which means that the order cycle took thirteen hours.

³⁶⁴ Doughty, *The Breaking Point*, 222

³⁶⁵ Jacobsen, *Dokumente zum Westfeldzug*, 31. According to Liddell Hart, *The Other Side of the Hill*, 178, the decision to turn the 12th Army was because of Hitler's fear for the flank. According to Halder, *Diaries*, 400, Halder himself dictated the order. (That he dictated the order is not stated in the diary of OKH found in Jacobsen, *Dokumente zum Westfeldzug*. Otherwise, it appears that most of what is stated in Halder's diary also could be found in the OKH sections of Jacobsen's compilation.) There is no mention of fear of flanks in Halder's diary or in the diaries of OKH and Army Group A. Hitler is hardly mentioned in these documents before 16 May. The fact that OKH conformed easily to Rundstedt's argument and the tone the diaries are written in reveals that the Germans at this stage were rather optimistic about the outcome of the offensive.

auf die Gefährdung ihrer Südflanke" advance towards the line Hirson-Montcornet. In a meeting with the commander of the 12th Army, Rundstedt also emphasised that Gruppe von Kleist should not be bound to the tempo of the infantry.³⁶⁶

However, later on 15 May, Rundstedt was becoming concerned about the southern flank and considered a halt at the river Oise. He assessed that if the enemy attacked from the direction of Laon it would be harmful to the tempo of the *Gesamtoperation*. According to Doughty, basing himself on documents from 12th Army and Kleist's headquarters, late on 15 May, the 12th Army issued order for the next day with the objective of winning more territory to the west. A defensive posture should be taken on 16 May. Doughty does not state how far the advance should be, but judging from Rundstedt's considerations on 15 May it should be no further than the Oise. That is consistent with Rundstedt's decision on 16 May at 1300 that no further advances should be made and that crossing the Oise-Sambre line should only be made with his consent.³⁶⁷

But late on 15 May, Kleist gave Guderian a new halt order, which has been the focus of attention in much of the literature concerning the campaign. Guderian became furious and neither would, nor could agree to these orders.³⁶⁸ After what was a heated argument, Kleist agreed to let Guderian continue his advance, a reconnaissance in force, for another 24 hours.³⁶⁹ However, Kleist's permission to allow Guderian to continue does not seem to deviate too much from the directions given by the 12th Army or Army Group A. According to Frieser, the halt line for 17 May was Avesnes-Vervins-Montcornet, well east of the Sambre-Oise line. This is not consistent with Rundstedt's decision on 16 May and the fact that Guderian had already reached Montcornet on 16 May.³⁷⁰

Guderian now advanced as fast as he could. Late on 16 May, his first units reached the River Oise, which was as far as he was allowed to advance. Rundstedt noted in the diary of Army Group A that he, but especially Kleist and Guderian, had no doubt that they could still cross the Oise. The enemy was retreating in "großer Unordnung, ja Auflösung". But he now feared that his southern flank was too weak. An attack on the flank at this stage would bring the whole

³⁶⁶ Ibid., 33

³⁶⁷ Ibid., 38

³⁶⁸ Guderian, *Panzer Leader*, 107. The timing of the argument with Kleist is unclear. According to Shirer, *The Collapse of the Third Republic*, 633, and Powaski, *Lightning War*, 151, Guderian got the halt order he did not accept 14 May. It appears that they mix up the arguments Kleist and Guderian had on 14 and 15 May.

³⁶⁹ Deighton, *Blitzkrieg*, 215. Reconnaissance in force appears to have involved for example opening fire at villages as a way of discovering whether there were enemy units there. They also discovered that civilians inhabited the villages. Obviously this increased the number of civilian casualties. One of Rommel's favourite tricks was to have his tank crews wave white flags, a clear breach of conventions of war.

operation in jeopardy. He therefore ordered a temporary halt in order to consolidate the flank.³⁷¹ This was the first halt order issued by Army Group A, but both Rundstedt and Halder at OKH were at this stage confident about a positive outcome of the operation. However, Guderian, still on the move towards the coast, sent out orders by radio to continue the advance. He did not clear this with his superior Kleist, which according to the *Truppenführung* would have been the proper thing to do. Guderian's radio message was intercepted by his superior's headquarters. He now openly ignored an order.³⁷² During the morning 17 May, Kleist met Guderian to reprimand him for disobeying orders, whereupon Guderian handed in his resignation. Some authors claim that Rundstedt blamed Hitler and OKH for the halt order.³⁷³ But there is nothing in the diaries of OKH or Army Group A that indicates this.

However dramatic this clash between Kleist and Guderian was, the interesting aspect in the overall picture at this stage in the campaign is that OKH, or at least Halder, considered the option of turning towards Paris. According to Warlimont, Halder's only thought was to continue the rapid advance as vigorously as possible. The central feature of the operation was the "most rapid possible breakthrough to the coast."³⁷⁴ But in the diary of OKH it is stated: "The [*Schwerpunkt*] of the south-western drive would have to be aimed at Compiègne, with the possibility of subsequently wheeling the right wing in south-eastern direction past Paris left open. A great decision must be taken now!"³⁷⁵ Halder thought that by strengthening Army Group B with the 4th Army, which was under the command of Rundstedt, Army Group B would be strong enough to deal with the allied forces in northern France. At noon Halder only noted that there was little mutual understanding between him and Hitler. Hitler, as opposed to Halder, and for that matter Rundstedt, saw the main danger from the south. Thus his decision was to consolidate the southern flank, but at the same time let the motorised troops continue their *Durchstoß* northwest. Was there not a *Sichelschnitt*-plan after all?

Both Halder and Hitler wanted to take the line of least resistance, but they had different opinions as to where the enemy was strongest. Why would Guderian, the manoeuvrist, who had the same perception regarding the enemy strength as Halder, want to act in accordance with Hitler's view? A reasonable thing for the manoeuvrists might have been to do exactly as Halder suggested.

³⁷⁰ Frieser, *Blitzkrieg-Legende*, 317

³⁷¹ Jacobsen, *Dokumente zum Westfeldzug*, 38. Halder and Hitler appear not have been too concerned about Rundstedt's decision.

³⁷² Doughty, *The Breaking Point*, 237

³⁷³ Mitcham, Samuel W., *Hitler's Field Marshals and Their Battles*, (UK, 1988), 88, Sheppard, Alan, *Blitzkrieg In the West*, (London, 1998), 72

³⁷⁴ Warlimont, *Inside Hitler's Headquarters*, 94-95. Warlimont uses the phrase "breakthrough to the coast."

³⁷⁵ Halder, *Diaries*, 405. See also Jacobsen, *Dokumente zum Westfeldzug*, 40

However, it appears that Guderian wanted to use his armour for the battle of annihilation in Northern France and not turn to Paris, which might have ended the war before a bloody *Kesselschlacht*. Is that, the attack on the primary enemy mass, the enemy's most potent units, what Lind meant when he suggested that Guderian's *Schwerpunkt* struck at the enemy's strategic centre of gravity?

6.5 Conclusion

That Halder thought of turning towards Paris, that it was Hitler's decision in March to reserve further moves, and that the directive for *Fall Rot* was issued on 31 May, all strengthen Naveh's argument that the Germans had their focus on the breakthrough.³⁷⁶ They wanted to win the first battle as they had wanted to in 1914, or to hack a hole in the front as Ludendorff had done in 1918.³⁷⁷

But this does not mean that there was no plan, or operational design for the campaign. Except for Halder's line of thought there is no evidence that the Germans, during the operation, were thinking about deviating from the design that was adopted on 24 February. That Army Group B for example was ordered to reduce its speed of advance so as to keep the allied forces forward in Belgium and that Halder, as early as 14 May gave directions on advancing as fast as possible towards the Channel support the case. This and Hitler's directive number 6 suggest that the Germans, at least initially, were pursuing a strategy of limited objectives. The German plan and the conduct of the operation supported such a strategy. However, Hitler had visions for German hegemony in Europe, which his memorandum of 10 October 1939 also reveals. That there were different plans with different objectives worked out in March, which also involved Italian forces, implies that Hitler was pursuing unlimited objectives, and that his strategy was an opportunistic one. *Fall Gelb* was just a step on the road. He wanted to see how far he could go in order to realise his vision, and apparently total war came upon him earlier than German society and the Wehrmacht was prepared for. Hitler's problem as a strategist was to translate his vision into a coherent grand strategy and military strategy and into unambiguous objectives. How can then the Wehrmacht's conduct be operational art other than perhaps in the Jominian sense of grand tactics? Which grand strategic objectives were they supporting?

Guderian is justified in his claim that he did not receive any directions whether to advance towards Paris or the Channel. However, he was familiar with the plan. Guderian never acted, as

³⁷⁶ The directive for *Fall Rot* is found in Jacobsen, Hans-Adolf, *Dokumente zum Westfeldzug*, 152

³⁷⁷ Lind, *Some Doctrinal Questions*, 137. Lind criticised the 1976-version of FM 100-5 for being too focused on winning the first battle.

is claimed, strategically on his own intuition. He was told what to do and acted until 16 May in accordance with the directions of the Army Group. He did however deviate from the course in a tactical sense. This happened for example when he turned south after the crossing, in order to fight the French on the flank. Once on the right course, the operation appears to have moved like an accordion. Guderian wanted to move fast, and this did not conflict with Rundstedt until 17 May. However, there obviously were clashes between Guderian and Kleist.³⁷⁸ But the sources and literature show some discrepancies regarding timing and the actual content of the orders that were given. The clashes between officers were unavoidable in the highly competitive system of the Wehrmacht, a system that undoubtedly fostered some personality traits that are not necessarily desirable in every society. It may also be doubtful whether such a system develops mutual trust, as Creveld claims it did.

Within the small manoeuvring space the Germans had during the first seven days of the campaign, a certain amount of synchronisation would be required in order to prevent units and columns from becoming entangled. In fact it would be a prerequisite for the concentration of forces. To paraphrase Guderian, was there really need for haste and disorder of this kind? The main concern for Army Group A was to win territory to the west, not for its own sake, but in order to deploy more troops into the *Schwerpunktraum*. Contrary to what the manoeuvrists would have wanted, there was a preference for elaborate plans, especially at the critical crossing of the Meuse. Minimum objectives were not given, nor were there stated any intentions or desirable end states relating to the enemy. Battles were sought, which Guderian's wish to attack through Sedan showed. Guderian's primary targets were enemy artillery units. Kleist wanted to cross the Meuse 13 km west of Sedan, which would have secured more room for manoeuvre and avoided a head on clash like that around Stonne. Not at any stage were enemy command and control facilities discussed as possible targets or deliberately sought out for destruction. However, unlike the allies, the Germans were successful in employing the full weight of their combined arms. But the plans for support from the Luftwaffe prior to the crossing reveal the friction that occurs when arms have, to use Leonhard's terms, different velocities. There were different requirements for preparation, and in this case the *Auftragstaktik*, expressed by Guderian and the commander of the 2nd Fliegerkorps, apparently without informing their superiors could have gone terribly wrong. The German strength, however flawed, appears to have been in their manner of organisation. By creating a Panzer group, but especially by keeping Luftwaffe units centralised at a higher echelon, they were able to plan and concentrate their assets within another

³⁷⁸ Guderian, *Panzer Leader*, 91. Guderian had no high opinions of Kleist even before the war.

dimension of time and space than the allies. *Fall Gelb* was an operation where the strategic, operational and tactical levels coincided in an *offensive à l'outrance* against an enemy whose strategy was "the avoidance of defeat, rather than immediate gaining of victory."³⁷⁹ It could be summed up in Rommel's words: "the battle of attrition is fought with the highest possible degree of mobility."³⁸⁰

7 Cannae reconsidered

In 216 B. C. Hannibal's army met a Roman Army twice as large under the leadership of Varro and Paulus at Cannae. Hannibal deployed his troops in a half moon formation, pointing in convex shape toward the enemy. Hannibal's less disciplined Gaul and Spanish troops were deployed in the middle of the formation, with the crack Carthaginian infantry at each end. Then Hannibal's horsemen were sent to meet the Roman cavalry on the left wing. While the cavalry battle raged, the Roman infantry was ordered to attack the middle of Hannibal's formation.³⁸¹ The Romans believed that this was the weak spot. By concentrating his overwhelming combat power against a weakness in the formation, he could break through and split the Carthaginian army in two. The two halves could then be defeated in detail, just like some historians suggest the Germans had done in 1914 and in 1940. The tribesmen withdrew, slowing down the Roman attempt to break through. Simultaneously Hannibal ordered his crack infantry to close in on the Roman flanks to conduct what has become known as the double envelopment.

In 1940 the French doctrinal solution to prevent an enemy from breaking through was a process called *colmater*.³⁸² Troops would be moved in front of the attacking enemy in order to slow him down, just as Hannibal's Gauls had done. By pinning the enemy frontally, and simultaneously extending to the enemy's soft flank, one could seal off the sector where the enemy had broken in, just as Hannibal's crack infantry and cavalry did. However, the French did not get the opportunity to follow their doctrinal *colmater* approach. The Germans broke through and could defeat the two halves of the French army in sequence, just as the Romans had wanted to. The story of the double envelopment is always seen from the victorious Hannibal's side. It has had an enchanting effect on generals. However as *Truppenführung* states: "Any force executing an envelopment also runs the risk of being enveloped itself."³⁸³

³⁷⁹ Doughty, *The Breaking Point*, 8

³⁸⁰ Wallach, *The Dogma of the Battle of Annihilation*, 284

³⁸¹ Goldsworthy, Adrian, *Cannae*, (London, 2001), 112

³⁸² Doughty, *The Breaking Point*, 29

³⁸³ Conell, Zabecki, *Truppenführung*, 89

General Saint states in his foreword to Doughty's book *The Breaking Point* that "[t]he fight around Sedan once again demonstrated the inviolable axiom that the victory invariably goes to the dynamic frontline leader who exploits maneuver to focus combat power on his enemy's weakness, who uses terrain as a lever not as a solution, and who personally intervenes when decisive action is required but does not exercise overriding, oppressive control of his subordinates."³⁸⁴ Those who want to present views contrary to those that prevail need heroes. In this case the manoeuvrists of the 1980's, reformers with a progressive outlook, wanted to shake the cultural conservatism of the military establishment. Considering the number of doctrines that claim to have a manoeuvrist approach, these reformers have enjoyed a considerable success. However this success does not necessarily reflect how the manoeuvrists' wars are conducted.

After the Second World War, the former chief of the German General Staff, Halder, was asked to comment on the 1949 version of the FM 100-5, and he answered in the spirit of Schnarhorst: "A manual should avoid anything that may be misinterpreted. It is impossible to overestimate the importance of a fixed standard nomenclature and terminology, and of clearly defined and universally understood concepts always used in an identical sense."³⁸⁵ In this respect the manoeuvrists have not succeeded. The historical substantiation for the adoption of these doctrines has been distilled to a degree where it eventually conforms to the manoeuvrist thought. In other cases manoeuvrist thought is just a reinventing of the wheel. It differs little from the doctrinal thinking of the era preceding the alleged paradigm shift in the style of warfare. There are not one, but several, and contradictory forms of manoeuvre warfare. The first of its two common denominators is a preference for the offensive. The other is perhaps best expressed in the Norwegian doctrine, which states that manoeuvre warfare is about being the clever one.³⁸⁶ Who could argue against that?

With regard to general system theory, there is a danger in the tacticisation of strategy, as some of the manoeuvrists propose. If there really is an attrition-manoeuve dichotomy, attrition warfare would be about the idea that tactics govern strategy. In a strategic context, tactics is the expression of the mechanistic behaviour of elements within the system. The elements are pursuing efficiency in what they are programmed to do. That would lead to attrition. Strategy is about the dialectic between ends and means. Naveh described this in a lecture delivered at the Norwegian Army Officers Academy: "In conceptualizing the operational design, the operator not only anticipates a futuristic configuration, which would successfully terminate the operation, but

³⁸⁴ Doughty, *The Breaking Point*, ix

³⁸⁵ Condell, Zabecki, *Truppenführung*, 287

also visualizes, in detail, the various components of the maneuvering system.”³⁸⁷ The real strength of the Wehrmacht in May 1940 was perhaps that it had an operational design. Moreover, in Germany, unlike other nations, there existed progressive and conservative forces that balanced each other. This is reflected in the German doctrine, which expressed the view that there was no finite answer, solution or method. The Germans were pragmatic with regard to the execution of their profession. Following a Hegelian view, a prerequisite for a synthesis is, as Hannah Arendt states in the book *Activa Vita*, “plurality is a *conditio sine qua non*.”³⁸⁸ Plurality requires independent thinking. Manoeuvre warfare, although it promotes the idea of independent thinking, may not succeed in this respect, as it prescribes which operational patterns to use and the personality traits to those who should employ them. Perhaps the real success of manoeuvre warfare is that it invites debate.

In her article on non-linear dynamics, Linda Beckerman states: “[T]he issue is not whether or not the existing doctrine is correct. The issue is why it has changed so little, why it is so mono-stable, given radical changes in the identity and nature of our adversaries.”³⁸⁹ We may not agree that conventional wars are over, but we could provide Beckerman with an answer both as to why doctrines have changed so little, and why they probably will not change. During the middle of the 1990’s, when manoeuvre warfare was introduced to the Norwegian military vocabulary, one of the most profiled proponents compared manoeuvre warfare with Blitzkrieg. It was hardly debated. Four years after the adoption of a manoeuvre warfare doctrine, the term “Network Centric Warfare” is becoming absorbed in the armed forces. The same proponent illustrates the new concept by using the Blitzkrieg analogy. The good thing is perhaps that Network Centric Warfare promises self-synchronisation.³⁹⁰

³⁸⁶ FFOD, 49

³⁸⁷ Naveh, Shimon, RMA: Tower of Babel or the Emergence of New Pragmatics of Operational Knowledge, (2000), lecture at the Norwegian Army Officers Academy, <http://homc.no.net/tacops/Taktikk/Kadettarbeid/naveh.htm>

³⁸⁸ Arendt, Hannah, *Activa Vita*, (Oslo, 1996), 29

³⁸⁹ Beckerman, The Non-Linear Dynamics, 10

³⁹⁰ Diesen, Sverre, Nettverksbasert Forsvar – Hva er egentlig det?, *Lufled*, (1/2004), 6

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