

NATIONAL DEFENCE COLLEGE

## **THE QUEST FOR MANOEUVRE**

THE ENGLISH MANOEUVRE WARFARE THEORIES AND BRITISH MILITARY  
THOUGHT 1920–1991.

Thesis

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**GLOSSARY**

BAOR	British Army of the Rhine
CBAA	Cavalry Brigade, Air Attack
CENTAG	Central Army Group (NATO)
CIGS	Chief of the Imperial General Staff
CINC	Commander-in-Chief
FEBA	Forward Edge of the Battle Area
FLOT	Forward Line of Troops
JRUSI	Journal of the Royal United Service Institution (From June 1971, Journal of the Royal United Services Institute for Defence Studies).
NBC	Nuclear Biological Chemical
NORTHAG	Nothern Army Group (NATO)
RAF	the Royal Air Forces
RTC	the Royal Tank Corps
RUSI	or R. U. S. I., Royal United Service Institution (From June 1971, Royal United Services Institute for Defence Studies).
TRADOC	Training and Doctrine Command
OODA	Observation-orientation-decision-action –cycle (OODA loop)
ROAD	Reorganization Objective, Army Divisions
WW I	First World War
WW II	Second World War

**APPENDICES**

- Appendix 1                      Affecting Parametres to the British Army  
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## 1 MODERN INTERPRETATION OF HISTORICAL THEORIES

“Still it is the task of military science in an age of peace to prevent the doctrines from being too badly wrong.”

Michael Howard, 1974

What is the actual reason in trying to gather information from such a wide sphere of military action, even though each age has its own strategic thought and “a man must be judged by the conditions and tools of his time”. The strategies of 1806, 1914 and 1939 were products of their own time. They were amalgamated with a varying degree of success to use and respond to the economic, social, technological and political conditions.<sup>1</sup> Naturally, the Napoleonic era had in broad outlines specific battlefield conditions and armament technology. The muzzle-loading flintlock musket was the principal infantry weapon in the mid-nineteenth century. By 1870, the breech-loading rifle had become the standard infantry weapon. In addition, significant alteration had occurred within the areas of strategy and tactics. According to Paul Dyster, military innovations have inspired vigorous effects at counter-adaptation. There is no doubt that antitank weapons from guns to missiles have changed the methods of battle. Whether one single technological innovation constitutes a revolution in warfare, is a matter of disagreement. Rather perhaps, as suggested by Dyster, “the revolution comes to fruition only when complementary organisational and doctrinal forms evolve that allow maximum expression of the military virtues of the new technology.” And this naturally takes time.<sup>2</sup>

The relationship between inspiration and influence, as evaluated by Peter Paret, is a matter of my interest. “Inspiration derives from the suggestive quality of the past”, which may stimulate and extend our thinking about the past. Influence, on the other hand, must “connote a degree of specificity”.<sup>3</sup> According to Richard E. Simpkin, the twentieth century contained two intensive periods of military innovations in mobility and in military theories. The first period included the discoveries of the powered wheel, track and wing during the early twentieth century. The

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<sup>1</sup> Paret, Peter (1990a): Napoleon and the Revolution in War. In *Makers of Modern Strategy. From Machiavelli to the Nuclear Age*. Edited by Peter Paret. Clarendon Press, Oxford 1990, p. 141.

<sup>2</sup> Dyster, Paul A.: *In the Wake of the Tank: the twentieth-century evolution of the Theory of Armoured Warfare*. A dissertation submitted to The Johns Hopkins University, Baltimore 1984, p. 544.

<sup>3</sup> Paret (1990a), p. 140.

second contained the discovery of the rotary wing aircraft during the early second half of the twentieth century.<sup>4</sup> I consider any inspirations and influences within the area of the art of war interrelated, as they greatly depend on one other. The battles fought in history must be treated as a unique chain of events. Still, there is always influence, ideas and exceptional and inspirational brainwork, which have produced occurrences and new innovations. Naturally, I tried to avoid any quotations from the past, which should be kept strictly in their original context and where I could not find any coherent continuation of military thought.

I understand the idea of doctrine according to modern British definition as “the function of the Military Doctrine is to establish the framework of understanding of the approach to warfare in order to provide the foundation for its practical application”.<sup>5</sup> It is a substitute for thought and a common background for training. More detailed, but also viable determination is given by I. B. Holley’s definition. He specified that the doctrine is a *generalization* of intellectual process. This means the combination of recorded experiences and further analysed data. Therefore, doctrine is what is officially taught, and a combination of theory and practice. It is an authoritative rule, a precept. Although I am investigating both military thinking and the doctrines, I do not consider them to be synonymous. Military thought has more to do with people, and the doctrines with institutional basis. It became clear to me that Britain lacked a clear and suitable doctrine almost throughout the whole twentieth century. Therefore, I decided to use the word doctrine very carefully, because it might cause some unnecessary misunderstanding.

Doctrines can be based upon different laws or theories. Nevertheless, no theory can or should reach the standards of “hard” mathematical science, but it can reach the standards of social and political science with ease.<sup>6</sup> Hence, as Thomas Edward (T. E.) Lawrence pointed out, nine-tenths of tactics are certain and taught in books. The irrational tenth is the test of the generals.<sup>7</sup> Obviously, the art of war should be studied in a scientific way.<sup>8</sup> Michael Howard

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<sup>4</sup> Simpkin, Richard: The Heavy Force/ Light Force Mix-Up. In *Armor*, number 4, vol XCIV. July - August 1985, p. 9. Brigadier Simpkin had an extensive responsibility for armoured vehicle development during his long career with the British Army.

<sup>5</sup> Design for operations – the British military doctrine (1989). Army Code No 71451. Printed in the United Kingdom for Her Majesty’s Stationery Office, p. 3; Design for operations - British military doctrine (1996), Army Code No 71451.

<sup>6</sup> Lind, William S.: The Theory and Practice of Maneuver Warfare. In *Maneuver Warfare. An Anthology*. Edited by Richard D. Hooker, Jr. Novato CA 1993, p. 3.

<sup>7</sup> T. E. Lawrence (from *The Evolution of a Revolt*) in *The Sword and the Pen. Selections from the world’s greatest military writings*. Edited by Adrian Liddell Hart, prepared by Sir Basil Liddell Har. Cassell & Company limited 1976, p. 243.

<sup>8</sup> Lider, Julian: *Towards a Nuclear Doctrine. Essays on British military thought 2*. The Swedish Institute of International Affairs. CEBE Grafiska Stockholm 1981, p. 43.

suggested the phrase “military science”, as nothing more than disciplined thinking about military affairs. Hence, it is essentially the “activity of the military themselves, at the level of their profession”.<sup>9</sup> Richard E. Simpkin comprehended the warfare theories that they should consist only of the “general explanations of the principles underlying a phenomenon”. He stressed the importance of finding the true “heart of the matter” from the surplus material until it is possible to reach the equivalent of scientific “laws”, which are also the ones most likely to endure.<sup>10</sup>

From my point of view, the possibility to be wrapped up in the world of military ideas and thoughts was itself an inconvenient experience while trying to handle the abstract reflections of historical thought. Military thought as a frame of reference is a field full of flickering, complex and puzzling allegations. At the same time it is a field of thought-provoking reflections, innermost thoughts and reconsiderations. Naturally, military history has limitations as a guideline to future events. However, from history we may find some good and instructive lessons, thus giving us clear instructions of the common mistakes made by soldiers throughout history. Another problem is naturally my narrow knowledge of the British Army. Books and articles may give an untrue picture of the basic components concerning the army and its organisational culture. The picture might even be misleading. Nevertheless, sufficient distance has helped in the process of choosing proper methods for approaching the subject. I am able to handle my sources more objectively, because I have no emotional bonds to interpret episodes in a too favourable light.

This study is based on the inspiration of English war theorists and their influence on British military thought in the twentieth century. I will concentrate on the basic ideas of creating army organisations and on the reflections within the art of war. I lay particular stress on the Second World War period, though significant attention is given to military thought in the late Cold War period. The Second World War opened an unparalleled field of practical implementation of British warfare theories, which otherwise would have been impossible to detect. The process of the French, German and Russian Army mechanisation was much the same that the British Army went through. Therefore, for the sake of comparison I use the basic ideas from these countries. Historical or ancient doctrines and theories of war are used when I consider the link between them and the twentieth century theories apparent. I tried to avoid an unnecessarily philosophical approach to the theme and therefore I connect the

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<sup>9</sup> Howard, Michael (1974b): *Military Science in an Age of Peace*. In *The Journal of Royal United Service Institution*, number 1, vol 119. London, March 1974, p. 4

<sup>10</sup> Simpkin, Richard: *Race to the Swift. Thoughts on Twenty-First Century Warfare*. Brassey's Defence Publishers. London 1986, pp. xviii-xix.



theories with the British Army organisational development. Any causal relationship between the war theories and the effect of these theories on army organisation and doctrines are naturally more or less questions of interpretation.

I will concentrate on the long-term development of organisations and on clear periods of transition in the army organisations, where change is clear and connection to any contemporary theory of war is obvious. I have left without notice most of the changes made during the interwar period and especially in the early 1940s, when organisations underwent constant changes. This was necessary for keeping together the study, which has exceeded the critical length of 100 pages. The process of finding a functional macro construction to my work became a great challenge. Naturally, some micro level observations are included to make my study deeper. As I was absorbed in the field of military thought and particularly its implications to the British Army, I found no reason to enlarge my interests into the case-by-case study of all battles from the period of my interest. There are several excellent studies concerning the battles of both world wars and the Cold War conflicts. Consequently, my approach is more based on explaining the long process of the application of military thoughts. I am not claiming that the sources I use are complete, but more accentuatedly I tried to use them as bases of qualitative selection.

Based on the justification above, I have excluded a major part of the Cold War. The appearance of nuclear armament changed dramatically the whole field of military affairs. The internal conflicts of the crumbling British Empire were no more than minor wars of no significant impact on the more comprehensive basis of military thought. The period from the 1920s to the 1980s contains a limited amount of operational level campaigns where the implications of mechanised warfare theories could be detected. Excluding guerilla warfare during the postwar period, there are even fewer campaigns left that the British Army participated in. Equally, where the Second World War was the test case of the piece of work from the interwar period, the Gulf War was the test case of the implications of the Cold War doctrines. Therefore, I am focusing on the time of the rebirth of conventional threat in Europe during the 1980s, when new conventional doctrines appeared due to the evident contribution of the United States Army. The interwar period is a significant era because the original ideas of mechanised warfare were born in that time.

I have excluded any political statements or comments concerning of the British air-ground-sea –policy. Michael Howard’s “Continental Commitment” and Michael Dockrill’s “British Defence Since 1945” are dealing with this subject more closely. Neither is it my intention to

deal with the basic assumptions of the political environment, the general nature of threats or even the efficacy of the use of force. The affecting parameters of the British Army organisations during the interwar period are presented in Appendix 1. Most of the parameters are relating similarly to both the areas of development of the art of war and organisational change. It is easy to find reasons for changing the exact position and relationship of these parameters, but still it provides one way to evaluate the relationship of different factors. Nevertheless, the identification of a certain parameter is much more important than estimating its actual location in the diagram. I will consider mainly the parameters concerning the development of the art of war.

The whole picture of the process of army development has to do with domestic and international politics, the international strategic situation, technological development and the development of society. Therefore, the picture should be seen as a conceptual whole. My intention is to prove the extent to which organisational changes are based on the thoughts of the most important British war theorists in the interwar period. The gap between the German *Auftragstaktik*<sup>11</sup>, literally mission tactics or British “directive control”, and the Anglo-American method of command described in the German as *Befehlstaktik*, which means, “control by described order”, is extremely large. These factors have more to do with the areas of command, control and communication and therefore they should be studied in the framework of management skills. Nevertheless, some basic ideas are included.

## 1.1 Definition of Concepts

“Maxims blindly adopted, without any examination of the principles on which they are founded.. our present practice is nothing more than a passive compliance with received customs to the grounds of which we are absolute strangers.”

Maurice of Saxony about the theories of war

In the 1980s, Richard Simpkin stated that the word “operational” had three different military meanings. The first is “having directly to do with warlike operations”. The second is the organisational level – from the theatre of war down to a division. This level was considered fine as long as a given level of formations represented a roughly constant capability. The last

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<sup>11</sup> Uhle-Wettler, Franz: *Auftragstaktik: Mission Orders and the German Experience*. In “Maneuver Warfare, An Anthology. Jr., Novato, CA 1993, pp. 236-245. *Auftragstaktik* was based on the idea that subordinates receive their commander’s intent (or battle plan) and their mission. Then they realize their situation and develop their intent, on the basis of which they plan their subordinates’ mission. When an unexpected situation sprang up, commanders could more easily act on their own - as long as they stayed within their commander’s intent; see also Grossman, pp. 177-178.

was based on a concept, a plan of warlike act to be considered “operational”.<sup>12</sup> Actually, the last definition has many similarities to the ideas of Basil Henry Liddell Hart<sup>13</sup> and to any representative of “manoeuvre warfare” theorist of the twentieth century. Studies of the the British interwar time, especially B. H. Liddell Hart’s works, have different meaning for the words tactics, strategy and grand (or national) strategy. According to Liddell Hart, grand tactics deals with the whole of foreign policy in both peace and war and integrates military factors with political, economic and diplomatic efforts. Tactics was an application of strategy on a lower level, so strategy was an application of “grand strategy” on a lower plane, a level of political decisionmaking. Tactics was seen to comprise of the actual fighting.<sup>14</sup> Liddell Hart’s “strategy” might be called nowadays as theatre strategy.<sup>15</sup> In his interwar writings Liddell Hart pointed out that the function of strategy was to minimise the need for battle.<sup>16</sup>

The position of operational art and grand tactics is much more complicated in this hierarchy. According to Richard M. Swain the operational art had precedence, as it resembled the level of the component or army headquarters during the Gulf War in the early 1990s. Grand tactics would similarly be detected in the major ground manoeuvre forces, the corps level, as it has to do with the “conduct of battles”.<sup>17</sup> Antoine-Henri Jomini’s<sup>18</sup> “minor tactics” would be a logical continuation of these definitions. In this study I use Liddell Hart’s own definitions to be able to catch his original thoughts. Therefore, minor tactics is handled within the framework of tactics, which was a direct measure, the actual fighting. He esteemed that strategy was not concerned merely with the movement of armies, but with the effect. It was not only a concept of a certain level of troops in specific surroundings, but a measure of an actual impact. As tactics was seen as an application of strategy on a lower level, so strategy

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<sup>12</sup> Simpkin (1986), p. 24.

<sup>13</sup> Liddell Hart (b. 31.10.1895, d. 29.01.1970) commissioned in 1914 into the King's Own Yorkshire Light Infantry and served at Ypres and on the Somme as a Company Commander. He served in the British Army until his retirement in 1927. He was military correspondent of the Daily Telegraph in 1925-1935 and military adviser to The Times in 1935-1939. In 1966 Captain Basil Liddell Hart was knighted in recognition of his role as one of the outstanding military commentators of his era.

<sup>14</sup> Liddell Hart, B.H.: *The Decisive Wars in History. A Study in Strategy*. London 1929, p. 150; Liddell Hart, B. H.: *Strategy. The Indirect Approach*. Frederick A. Praeger, Inc. New York 1954, p. 335.

<sup>15</sup> Swain, Richard M.: “Lucky War”. *Third Army in Desert Storm*. U.S. Army Command and General Staff College Press, Fort Leavenworth, Kansas 1997, p. 329. U.S. theatre strategy was “indispensable” in the Gulf War. It meant the “purposeful integration of military resources in the theatre of war to achieve the military objectives set by the president and his secretary of defence.”

<sup>16</sup> Swain, Richard M.: *B.H. Liddell Hart and the creation of a theory of war, 1919 - 1933*. *Armed Forces & Society*, vol 17, 1990, p. 43.

<sup>17</sup> Swain, p. 326; Howard (1965), p. 14.

<sup>18</sup> Jomini was born in 1779 in Switzerland. Jomini was a product of the great Revolution from 1789 on. His most important works are *Traité des grandes opérations militaires* (Paris 1811) and *Précis de l'art de la Guerre* (Paris 1838). Many of Jomini’s specific ideas are now only of historical interest.

was an application of “grand strategy” on a lower level.<sup>19</sup> The operational level appeared officially in 1989 in British military thought, but to be able to indicate the ideas of British theorists involving this level during most of the twentieth century, I have used the idea of operational level side by side to the grand tactical ideas. As there is no clear distinction between the tactical and strategic formations, I must remind that as Simpkin’s third meaning of doctrine stated, operational level should be considered as a plan of a warlike act to have “operational level” results, just as mentioned above by Liddell Hart. Therefore, a tactical formation can cause a strategic level outcome.

Also the difference between movement and manoeuvre can be attached to a broader context of the different levels of war. The methods of using mobility revolutionarily changed the movement pattern in ancient Europe, but not until “the barbarian” horsemen gave an example. Particularly, troops under Genghis Khan combined the traditional mobility of the nomadic horsemen with a highly developed military organisation.<sup>20</sup> Historically, armies that have operated at a faster pace than their opponents have been successful almost without exception. For Henry Lloyd<sup>21</sup> (famous British eighteenth century military thinker) the army from eighteenth century that moved and marched with the greatest velocity must, from those circumstances alone, finally prevail. Therefore, velocity was everything in war.<sup>22</sup> The armies of Belisarius, Genghis Khan, Napoleon Bonaparte and Hitler were all designed with the intent of achieving superior organisational mobility over their foes. Similarly, advanced and more rapid decision-action cycle made it possible to penetrate the adversary’s decision-action cycle. Hence superior mobility is not sufficient if it is not properly exploited against the adversary’s organisation and spirit.

John Antal defined the idea of the separate meaning of manoeuvre and movement quite comprehensively through a dichotomic set-up, where movement was placed as opposite to firepower on tactical level, manoeuvre as opposite to attrition on operational level, and finally direct approach as opposite to indirect approach on strategic level. A different approach must be separately decided upon at each of these. This decision influences the selected style of

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<sup>19</sup> Liddell Hart (1929), pp. 150 - 152; Howard (1965), pp. 14 - 15.

<sup>20</sup> Ogorkiewich, Richard (1955b): Panzer Grenadiers. Infantry of the German Armoured Formations. In *Armour*, number 6, vol LXIV, November - December 1955. Washington 1955, pp. 10 - 15, p. 28.

<sup>21</sup> Lloyd (1792), pp. x - xvii. Henry Lloyd (1720 - 1783) was sometimes called Henry Humbrey Evans, a Welshman. He served with the Prussian Army, became Major General in the Austrian Army and commanded a Russian division at the siege of Silistria. His first book *The Political and Military Rapsody* appears to be derived from the author’s experience of being a kind of secret scout during the Jacobite Rising in 1745. He went on a mission to Wales, dressed up like a priest, and tried to enlist support for the Jacobites. He traveled to various western England ports – possibly with a view to a French landing.

<sup>22</sup> Lloyd (1766), preface.

conflict at each level.<sup>23</sup> Naturally, these ideas are based on modern interpretations concerning the matter. Karl Maria von Clausewitz<sup>24</sup> has given the most famous definition of the attritional strategy. He argued that “direct annihilation of the enemy’s forces must always be the dominant consideration”. Naturally this sentence is too vulnerable to any further conclusions since it has been torn out of its context in his discussion of war in its absolute form.<sup>25</sup>

British modern definition of the concept of “manoeuvre warfare” is “a war-fighting philosophy that seeks to defeat the enemy by shattering his moral and physical cohesion – his ability to fight as an effective, co-ordinated whole – rather than by destroying him physically through incremental attrition.” This concept had a more derivative term; the manoeuvrist approach, which is an attitude of mind in which doing the unexpected and using initiative and seeking originality, is combined with a ruthless determination to succeed.<sup>26</sup> Basically, the basic idea of manoeuvre has not changed much during the last 60 years, as the Field Service Regulation (1935) defined manoeuvre as a “movement that aims at inducing or forcing the enemy into an unfavourable position”.<sup>27</sup> Therefore, I use this definition throughout my study, though there are certain reasons why manoeuvre warfare is separate from the preceding ideas of manoeuvre. More about this scheme of things in Chapter 6.

I found much inaccuracy in the military terminology concerning tracked and armoured vehicles. Nowadays we have main battle tanks (MBT), armoured personnel carriers (APC), infantry fighting vehicles<sup>28</sup> (IFV), armoured scout cars and other armoured vehicles. During the interwar period, there was no distinct division between different armoured vehicles. I use the word “tank”<sup>29</sup> for any kind of tracked or wheeled vehicle as long as it was intended to be used in combat situations and as long as it was at least lightly armoured. In the latter part of

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<sup>23</sup> Lind, pp. 3 - 4; Antal, p. 59.

<sup>24</sup> Clausewitz was born in 1780 in Burg, about 100 *kilometres* southwest of Berlin. He became famous for his thesis of neglecting theories to generate doctrines of rules of action. He saw that knowledge and performance must be separated, though utilitarian benefits may get from valid theories. He served in various armies. In 1819 he began the writing of *On War*. After eight years he had completed the first six of eight planned parts. His work was left incomplete, because of his death in 1931.

<sup>25</sup> Mearsheimer, p. 33.

<sup>26</sup> United Kingdom Glossary of Joint and Multinational Terms and Definitions. Joint Warfare Publication 0-01.1, p. M-3.

<sup>27</sup> Field Service Regulations (1935), p. 21.

<sup>28</sup> The idea is that an infantry squad can conduct combat operations without dismounting.

<sup>29</sup> The tank was the product of the tactical stalemate that developed in France and Belgium after the early months of the war. The first ideas of the tank appeared in the mind of British Lt. Col. E. D. Swinton in 1915; *Tank Training*. Volume I, training. The (British) War Office, London 1930, p. 1. The definition “Tank” was also used in this manual.

my study I use the new concepts, as if their actual meaning was precise in the original text. John Frederick Charles Fuller<sup>30</sup> and also Liddell Hart tended to be rather vague about the precise definition of what constituted a “tank” in the interwar period.

## 1.2 Sources, Hypotheses and Questions

“It is universally agreed upon, that no art or science is more difficult than that of war; yet by an unaccountable contradiction of the human kind, those who embrace this profession take little or no pains to study it.”

Henry Lloyd, *The History of the Late War in Germany*, 1766

My intention is not to judge the British defence policy, but to explain the mainstream of the process of British Army organisational development and the framework of British warfare thought ranging almost throughout the whole twentieth century. Therefore, this thesis gives only a narrow overall picture of the true nature and broad extent of Britain’s defence policy, military training and organisational development, although seventy years is actually a short span in the history of military ideas and warfare theories. The frame of reference is presented in Diagram 1. My intention is not to represent the chain of every interesting or even important event related to my frame of reference. My aspiration is more focused on the carefully selected “case studies” from crisis situations, and on peacetime processes signifying the development of organisational and mental spheres of armoured warfare. These few “case studies” or examples of operations are included to shed light on the practical implications of British war theories. To meet the criterias of my study, these campaigns and operations are to signify practical applications of theories and practices within my interest. I will make some fresh interpretations from campaigns studied frequently during the last decades, even though my intention has not been to reveal any new details from these campaigns, as I only use secondary sources and literature in describing these events. Detailed information and more comprehensive data from these campaigns must be found in other studies.

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<sup>30</sup> Winton, Harold: *To Change an Army*. General Sir John Burnett-Stuart and British Armoured Doctrine, 1927 – 1938. University Press of Kansas 1988. p. 17. Fuller (b. 1878, d 1966) entered the Staff College in 1913. He had no particular desire for a military career. He had a habit of thinking analytically from first premises. As such he found himself continually at odds with the directing staff. Fuller served as a Chief General Staff Officer of the Tank Corps since 1916. This was a perfect job for Fuller in which he could fully apply his energy. At the end of the war he was personally identified with the Tank Corps. In 1922 he became chief instructor at

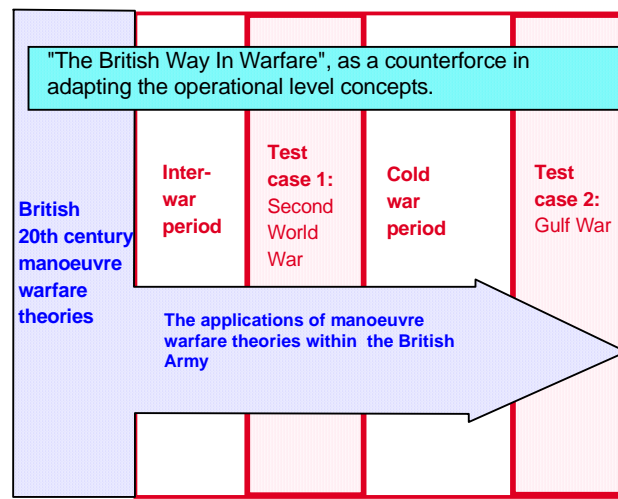


Diagram 1. Frame of Reference

The process of mechanisation, especially the development of the thoughts of armoured warfare, is the most important factor in my study concerning the manifestation of the armoured manoeuvre warfare doctrines. Mechanisation itself has been regarded as the most important criterion for appreciating the British Army’s adaptation and openness to the ideas of manoeuvre warfare during the interwar period. I will concentrate on the development of armoured forces, even though I am also interested in the general mechanization process as such. Hence, the process of mechanisation was a real “starter” of the ideas of modern applications of manoeuvre warfare. Therefore, the organisation of the armoured forces is a clear indicator. It is rewarding to draw a comparison between the process of inter- and postwar thoughts concerning these ideas. Naturally, the number of armoured divisions or armoured vehicles in organisations alone does not correlate with better usage of the warfare theories. The Germans, who are even nowadays titled the masters of manoeuvre warfare during the Second World War, had only 19 armoured divisions out of a total force of 145 divisions in 1941 just before the invasion of Russia. Their divisions contained a large amount of obsolete vehicles and most of the infantry divisions remained dependent on horse transport.<sup>31</sup> The explanation must therefore lay in the doctrines and the basis of the army and especially in the different use of theories and levels of war in reaching the aims.

The way I use my sources determines considerably the scientific cogency of my thesis. There are certain features of the history of ideas in my approach to the subject. Therefore, the prospect is a combination of the themes of the history of military ideas, war history and war theories. My main method is source criticism, as I am trying to construct a coherent entity from the scattered picture of British twentieth-century military thought and the doctrinal

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the Staff College and in 1926 military assistant to the Chief of the Imperial General Staff. He retired prematurely from the army in 1930 as a Major General.

<sup>31</sup> Bond, Brian: British Military Policy between the Two World Wars. Clarendon Press, Oxford 1980, p. 187.

development withing my interest. Following the traditional approach in social sciences, I use mainly the original texts of British war theorists B. H. Liddell Hart and J. F. C. Fuller as my sources. Their subjective views on the theoretical approach of war form the basis of the whole work. Henry Lloyd's original texts from the eighteenth century are used to give a more time-dimensional effect to twentieth-century military thought. Secondary literature is used to give more depth to these ideas and to depict the case studies from WW II and the Gulf War.

Nevertheless, as very few Finnish studies exist, it is time for us to react to the present-day Anglo-American interest. Even though this study does not include any part that directly accentuates Finnish standpoints to the art of war or organisational development, there might still be some aspects, ideas and methods that are appropriate for such use and considered without the need of exhaustive revising. The Anglo-American research tradition seems to be predisposed to a considerate conditioning of their few theorists of warfare. For me, it was extremely difficult to form a general picture of the process of mechanisation during the interwar period and especially of the factors, which were truly relevant for the whole process. For some reason, researchers tend to praise to the skies the theorists they study - often without criticism. Brian Bond is an exception. Despite his close and friendly relationship with Liddell Hart, he has created a complete picture of Britain's security and military policy during the interwar period. In its entirety, I was quite surprised at the criticism focused on the interwar British Army. Besides the tangled criticism from the early period, I found serious difficulties in forming an overall picture of the late Cold War period, as there were fewer critics. Therefore, the most rewarding part of my thesis is within the reflections of British military thought and in the process of the transformation toward new military concepts of different levels.

The whole progress of twentieth century evolution of the theory of armoured warfare is quite itemized in Paul Dyster's dissertation, "In the Wake of the Tank", in which he approached the subject from a technology-tactical oriented viewpoint. The evolution of antitank countermeasures and the firepower capability of tanks are given unnecessary emphasis, even though they only challenged the actual use of tanks. In addition, there are some important pieces of literature and authors that have had quite a significant importance on my thesis. Brian Bond's and Michael Howard's studies on British interwar military thought and policy are quite unparalleled, as well as Julian Lider's and Lawrence Friedman's postwar studies. In addition, Harold Winton's book, "To Change an Army", is an excelent presentation of the period from the 1920s to the 1930s. His captivating approach to the subjects of army



modernisation, doctrinal development, organisational changes and the role of General Sir John Burnett-Stuart in this process, is extremely well put together.

By the end of WW II, the British Army had developed a distinctive approach to high intensity war consisting of a few features of the so-called “British Way in Warfare”. Most of these ideas can easily be called common historical features of Anglo-American and also French military practice, as will be demonstrated later in this study. Basically, these practices have a negative tone in my frame of reference, despite the fact that British practices, actual instruments and methods have proved successful for centuries for surviving in battlefield conditions. Original ideas are mainly from Colin McInnes, but S. J. Coy, Brian Holden Reid, A. S. H. Irwin and Harold Winton have given considerable support to the idea that there are certain features generalized in the British Army.<sup>32</sup> I have just condensed them into a compact description.

- 1 The lack of formal doctrine and a clear focusing on the tactical level of war.
- 2 Preference for emphasising firepower in lieu of movement.
- 3 The Regimental system with a strong *esprit de corps*, which basically hindered the development of all-arms and inter-service cooperation and any radical changes in Army doctrine and organisation.
- 4 Conservative policy against radical innovations inside the Army.
- 5 Debate between “the Continental commitment” and an extra-European role.
- 6 The lack of resources and popular support to make significant changes in its doctrine and organisation.

Colin McInnes has described the idea of a British “Way in Warfare” to comprise of two parts: the basic assumptions held about the strategic environment and the strategic options pursued in dealing with threats. My study concerns the latter: how organisations act, and how the British Army prepares for and fights its wars. McInnes had concluded that the British Army tended to be poorly equipped when prepared to fight against armies with the very best equipment. A lack of formal doctrine has caused an *ad hoc* and simultaneously conservative approach towards the conduct of war. In addition, high morale, a strong *esprit de corps*, and a high level of tactical know-how had compensated for all such shortages, but at the same time

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<sup>32</sup> McInnes, Colin: *Hot War Cold War. The British Way in Warfare 1945 - 95*. Charles Scribner’s Sons, London 1996, p. 109; Winton, pp. 1 – 2; Coy S. J: *Depth Firepower: the Violent, Enabling Element*. In “The Science of War. Back to First Principles”. Padstow 1993, p. 146 – 147; Irwin, A. S. H.: *Liddell Hart and the Indirect Approach to Strategy*. In *The Science of War. Back to First Principles*. Padstow 1993, pp. 63 – 79; Reid, Brian Holden: *War Fighting Doctrine and the British Army*. Annex A to Chapter 1. June 1994. Directorate General of Development and Doctrine. Army Code 71632. Edition 3.

they have hindered the development of all-arms and inter-service cooperation. Also the focus on the tactical level of war had driven to British into a “set-piece” battles of *materiel*.<sup>33</sup>

The British foreign policy had been defined as the “pragmatic pursuit of their own enlightened self-interest; and their military planning follows a similar pattern.”<sup>34</sup> This pragmatism is to do with a widespread reluctance to formulate any scientific, doctrinal statements and to view and resolve each problem as it occurs on its own terms, free from any system. In addition, much of the British Army practice has been based on the lack of coherent doctrinal philosophy throughout the twentieth century.<sup>35</sup> J. P. Kiszely evaluated the British organisations and tactics as giving too little scope for flexibility. Some changes were made, albeit only very slowly, as “victory was eventually gained by the overwhelming material and numerical forces that Britain put in the field”.<sup>36</sup>

The question at the heart of the “British way in warfare” was also one of grand strategy. To what extent should Britain, as a tolerably defensible island, involve itself in the politics of mainland Europe? As with all theorists of restraint, Liddell Hart's own healthy preoccupation with the peace that might follow a war only worked as long as the adversary could also imagine a return to “normal relations” and was not out to transform the old order. For limited ends, limited means might be adequate, but Liddell Hart strained to go further in using limited means for total ends.<sup>37</sup> As Michael Howard put it, “the apportionment of resources between expensive armed forces; above all, the identification and assessment of military threats, and the judgement as to how much of national resources can be spared to deal with them: all this still forms the core of British defence policy, as it is at the beginning of the century”. According to Michael Howard, the British Isles are adjacent to a European continent “peopled by nations whose culture has no more in common with our own than has that of countries founded by men of our own stock in such inconveniently distant parts of the world as North America.”<sup>38</sup> Despite the worldwide commitment, the peacetime British Army has traditionally

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<sup>33</sup> McInnes, pp. 2, 71, 109; see also: Bond Brian: War Fighting Doctrine and the British Army. Army Doctrine Publications Volume 1. Operations, annex A to chapter 1. Army Code No 71565. Published in June 1994, Introduction.

<sup>34</sup> Jackson W. G. F.: The North African Campaign 1940 – 1943. B. T. Batsford Ltd., London 1975, p. 47.

<sup>35</sup> Reid (1994), Introduction.

<sup>36</sup> Kiszely, John P.: The Contribution of Originality to Military Success. In The Science of War. Back to First Principles. Padstow 1993, p. 29.

<sup>37</sup> Freedman, Lawrence: The Gulf Conflict and the British Way in Warfare. In King's College London Liddell Hart Center for Military Archives Lecture, 20.11.1997 [referred to 20.6.2000]. Available at <URL:<http://www.kcl.ac.uk/lhcma/info/lec93.htm>>.

<sup>38</sup> Howard, Michael (1974a): The Continental Commitment. The dilemma of British defence policy in the era of the two world wars. The Ford Lectures in the University of Oxford 1971. Pelican Books 1974, p. 9 - 10.

been comparatively small. The policy and the warfare theories of extra-European conditions were not under particular interest of the early twentieth-century British war theorists and therefore I will not fix my attention on those regions in question.

Nevertheless, Hew Strachan has alleged that there has never been a British way in warfare. This reflection is based on the rethinking of Liddell Hart's ideas of the theme. His justification is based on calling Liddell Hart's theoretical generalizations into question. According to Strachan, Liddell Hart's ideas were too involved in the collection of strategic ideas and that these theses should not be connected to the ideas and doctrines of British warfare.<sup>39</sup> Yet I am not up to presenting any such connection, even less any allegations concerning the strategic level of war. I expected to get plenty of information or any solutions to the problem of British way in warfare from the Field Service Regulations and other Army manuals. Unfortunately, most of these manuals proved to be mostly instructions of protocols for the contemporary military. According to Julian Linder, this is a distinct feature of British military thought, as the general instructions of the principles written in manuals were actually taken less literally than in the American officials. These principles have been viewed as "distillations" of military experience and consequently as devices for use by the commander. The actual adaptation to specific principles is made according to current times and circumstances.<sup>40</sup> Nevertheless, some fundamental points of departure can be found from these regulations.

According to Liddell Hart, a distinctively British practice of war, which was based on experience and proved by three centuries of success, was finally disturbed by a "slavish imitation of Continental fashion". This led finally to the unfavourable conditions of WW I. He claimed that the British historical practice was based on mobility and surprise, aptly used to enhance her relative strength while exploiting her opponent's weaknesses.<sup>41</sup> It cannot be denied that the importance of naval supremacy to an island state throughout history has been remarkable. This was also the determining factor in shaping the whole defence policy of the Empire and, therefore, it certainly also had its impact on military thoughts.<sup>42</sup> I would consider the true and ultimate task of Liddell Hart's view of the British way of warfare as an effort to

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<sup>39</sup> Strachan, Hew: *The British Way in Warfare*. In "The Oxford History of the British Army". Oxford University Press 1996, p. 399.

<sup>40</sup> Linder (1981), p. 44.

<sup>41</sup> Liddell Hart, B. H. (1935a): *When Britain Goes to War*. London 1935, pp. 9 – 10; According to Brian Bond (1977, p. 65) Liddell Hart's first notions of a "British Way in Warfare" in January 1931 in a lecture at the Royal United Service Institution entitled "Economic Pressure or Continental Victories".

<sup>42</sup> Howard (1974a). pp. 23 - 24

further and justify the present-day British art of war from the critics of the detractors. A more just sentence would be to judge his ideas in the context of the period under observation.

Another significant feature in the British Army is the value of local regiments. The historical background to the dominance of the regiment lies in the system itself. The role of the single-arm regiment was based on the dominance of colonial garrisons. The regiment took the shape of an enlarged family, a self-contained community, with its own welfare arrangements, its own recreations and sports.<sup>43</sup> The *camaraderie* and *esprit de corps* helped to maintain morale whilst stationed overseas for long periods. It expressed the ability to gain the trust of indigenous people, with relatively small bodies of men stationed for long periods of time in environments far from home. This system was an ideal response to any problems within the British Empire, when Britain got along without any help from its allies. In addition, only little attention was devoted to larger campaigns since the nineteenth century.<sup>44</sup> I have excluded the main impact of this characteristic British Army “Cardwell system” from the affecting parameters, though it offers a captivating perspective on the recruiting system of the British Army.<sup>45</sup> Much of the present-day British Army mentality has its roots in this system, which helped to sustain army morale “in times of government neglect”.<sup>46</sup>

With the presumptions of the context of the British way in warfare in background, I would conclude my questions as follows:

- 1 What kind of problems has the lack of formal doctrines caused to the British Army during the twentieth century?
- 2 Why has the steep division of strategic and tactical approaches to warfare been problematic in implementing the ideas of early twentieth-century warfare?

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<sup>43</sup> Strachan, p. 414.

<sup>44</sup> McInnes, p. 27; Reid (1994), Introduction.

<sup>45</sup> The name is derived from Edward Cardwell, who became a Secretary of State for War in 1868. Spurred mainly by Prussia’s use of the reserve system in its victories over Denmark, Austria, and France, Cardwell brought the number of troops overseas into balance with those at home, reduced the terms of service from twenty years to six years with the colors and six with the reserve, and reorganised the infantry regiments of line. These infantry regiments were placed on a territorial basis and reconstituted with a depot for recruiting and two “linked battalions”, one to serve at home and one overseas. This was in many ways an ingenious compromise, designed to meet simultaneously the actual demands of the Empire and the potential demands of the Continent. The home army, however, remained an amorphous collection of battalions suited only to finding drafts and rotating with the units overseas, and the mounting of any protracted overseas expedition threw the system out of balance. Furthermore, Cardwell’s system of linked battalion dictated that the organisation of the army at home mirror the organisation of the army abroad.

<sup>46</sup> Drewry, C. F.: The Lessons of the 1920s and Modern Experience. In *The Science of War. Back to First Principles*. Padstow 1993, p. 20; see also, Reid, Brian Holde: Introduction: The Operational Level of War and Historical Experience. In *The British Army and the Operational Level of War*. Edited by J. J. G. Mackenzie and Brian Holden Reid. Biddles Limited, Staff College, 1989, p. 10.

- 3 Are there similarities between the periods of Second World War and the Gulf War concerning the practical implications of the ideas of mobile warfare?
- 4 How have the U.S. Army and NATO affected British military thought and organisational development?

### 1.3 The Duality within Western Military Thought

After getting absorbed in the historical ideas of military thought, I became aware of the sharp division between the physical and non-physical elements in the Western art of war. Actually, this duality gives a profound basis to my work and, therefore, I will depict some features of eighteenth and nineteenth century military thought, not only influencing early twentieth-century military affairs and thought, but also our present-day art of war.

Henry Lloyd pointed out that there were two parts to the art of war, a mechanical part that “may be taught by precepts” and by mathematical principles. The other had no name, “nor can it be defined nor taught. It is the effect of genius alone”.<sup>47</sup> Marshal M. C. de Saxe divided the art of war similarly into methodical and intellectual parts.<sup>48</sup> Jacques Antoine Hippolyte de Guibert<sup>49</sup> did likewise. The first part was an elementary part, consisting of detail of the formations and exercises to different organisations. The second part was a compound part, which was the science of generals, including all the great features of war, such as the deployment of armies, orders of march, orders of battle.<sup>50</sup> The duality has striking similarities to Lloyd’s ideas. Surely, it is a question of interpretation, whether Henry Lloyd meant tendentiously that there should be a sharp distinction between the two approaches of war. At any rate, I am quite convinced that these two approaches to war had more than a merely interactive relationship. They should be seen as a source of the same energy and therefore even more decisively dependent to each other. A true general needs both of these approaches,

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<sup>47</sup> Lloyd (1766), preface.

<sup>48</sup> Maurice de Saxe (from *Reveries on the Art of War*) in the *Sword and the Pen*, p. 92. Maurice de Saxe was 26 year older than Henry Lloyd was. Lloyd obtained Marshal Saxe’s permission to accompany the French army as a mounted draftsman. The influence of the contemporary military thought had certainly affected him.

<sup>49</sup> He was born in 1743 and joined the French army as a young man. His *Essai Général de Tactique* was published in 1770. It made him a celebrity in Paris society. He retired early from the army. His production was largely forgotten by the Revolution.

<sup>50</sup> Jacques A. H. de Guibert (from *General Essay on Tactics*) in the *Sword and the Pen*, pp. 111 – 113.

but cannot succeed without the talent of the latter (the original reference to Lloyd's meaningful text is in the footnote).<sup>51</sup>

Henry Lloyd therefore devoted almost as much attention to the question of leadership and morale as he did to those of logistics, tactics and the general conduct of war. Two schools of military thinkers with slightly different emphases can trace their ancestry to Lloyd. Firstly, the school that followed him in establishing firm principles of strategy based on "quantifiable geographical and logistic data" (i.e. Jomini). Secondly, the school that stressed primarily philosophical and political aspects of war which made it impossible to treat its conduct as an exact science (i.e. Clausewitz).<sup>52</sup> Jomini's basic ideas concerning strategy have been simplified. Indeed, he did favour the invariable scientific principles, but only as a source of prescribing offensive action to mass forces against enemy decisive points.<sup>53</sup> The destruction or captivation of those points would seriously weaken the enemy. They could be road junctions, river crossings, a mountain pass, a supply base or even an open flank of the enemy army itself. Therefore the "geographical and logistic data" are only elements in the overall picture.<sup>54</sup> Also Clausewitz's philosophical and political visions had rational backgrounds: the Napoleon's doomed campaign in Russia gave him ground to appraise Napoleon's abilities to unify the political and military commands.<sup>55</sup>

Nowadays we emphasise the direct effect of the thoughts of Jomini and Clausewitz on thoughts of twentieth century war theories. It is therefore important to find theorists who influenced the thoughts of the warfare theorists of the twentieth century, even if it is not easy to find pioneers before the pioneers. Jomini's influence is naturally more clear because it provided a ready-made outline for the staff-course that the development of nineteenth-century warfare was making increasingly necessary for the armies of Europe and North America.

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<sup>51</sup> Lloyd (1766), preface. "In this art, like rules, by which, a poem or an oration, should be composed, and even compose, according to the exactest rules. But for want of that enthusiastic and divine fire, their productions are languid and inspirit: so in our profession, many are to be found, who know every precept of it by heart; but alas when called upon to apply them, are immediately at a stand. They then recall their rules and want to make every thing: the rivers, the woods, ravines, mountains, etc. subservient to them: whereas their precepts should, only the contrary, be subject to these, who are the only rules, the only guide we ought to follow; whatever manoeuvre is not formed on these, is absurd and ridiculous. These form the great book of war; and he who cannot read it, must for be forever content with the title of a brave soldier and never aspire to that of a great general."

<sup>52</sup> Howard (1965), p. 8.

<sup>53</sup> ATP-35 (B). Land Force Tactical Doctrine (Change 1). NATO Publications. Published in 1995, p. XXVI. Decisive points are those events, the successful outcome of which is a precondition to the effective elimination of the enemy's centre of gravity. An event is not necessary a battle; it may be the elimination of a capability and need not therefore have a geographical relevance. Conversely, the term decisive point may describe an event required to protect one's own campaign plan.

<sup>54</sup> Shy, John: Jomini. In *Makers of Modern Strategy. From Machiavelli to the Nuclear Age*. Edited by Peter Paret. Clarendon Press, Oxford 1990, pp. 146, 154.

Clausewitz was appraised as too confusing and too difficult to be taught to young officers.<sup>56</sup> Hence, the direct reference to nineteenth-century theories is objectionable if the factual connection is not obvious. Several authors remark on Clausewitz's vulnerability to mistranslation. Clausewitz's unfinished text is difficult to understand and must be taken into consideration when putting his theories and ideas into practice. It is erroneous to expect his ideas and theories to coincide in every circumstance.<sup>57</sup> Based on nineteenth century military thoughts, Clausewitz criticized any combination of war and science, because he saw it as doing more to the province of social life and therefore to policy. The study of war was seen similar to the study of painting: both activities demanded specific technical expertise, but whose outcomes are not predictable and cannot be mechanically pursued.<sup>58</sup> According to R. Simpkin, the text of Clausewitz had been misunderstood by the blind imitation of the successful Prussians. The inevitable result was the dedication of attrition based on ideas in American, British and French armies.<sup>59</sup>

I have decided not to use Sun Tzu's theories. In my opinion, justifying him or his contemporaries to any similarities or links to twentieth century theories is too difficult and unscientific. There is no reason to try to combine Western and ancient Chinese military thoughts. We must remember that the gap between the translator's and Sun Tzu's language and culture and is very wide. It is also essential to bear in mind that the ancient Chinese civilization had a significantly different worldview and a distinct concept of time compared to interwar Europe.<sup>60</sup> The force dichotomy is somewhat similar to Western military thought and therefore there is a temptation to use it. Some scholars have adopted the ideas of indirect and direct measures from Sun Tzu' text. It is true that *Ch'i* and *cheng* are basic elements of Sun Tzu's military thought. *Ch'i* can be translated as the "crafty" or indirect method. These forces are employed to move rapidly to fall on the enemy's rear; *cheng*, as the "straightforward" or direct method, is used for attacking and fixing the enemy. These different methods are usually divided into "ordinary" and "extraordinary" forces, although, according to O'Dowd and Waldron, in Sun Tzu's texts the indirectness and directness are considered to be part of the same substance of energy. The greatest difference to European twentieth century

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<sup>55</sup> Paret (1990a), p. 138.

<sup>56</sup> Howard, Michael: Jomini and the Classical Tradition in Military Thought. In "The Theory and Practice of War". London 1965, pp. 14 - 17.

<sup>57</sup> Paquette, p. 41; Paret, Peter: Clausewitz and the Nineteenth Century. In The Theory and Practice of War. London 1965, p. 29.

<sup>58</sup> Karl von Clausewitz (On War) in the Pen and the Sword, pp. 149, 150; Paret (1990b), p. 187.

<sup>59</sup> Simpkin (1986), p. 20.

<sup>60</sup> Paquette, Laure: Strategy and Time in Clausewitz's On War and in Sun Tzu's The Art Of War. In "Comparative Strategy", Volume 10, p. 37.

mechanisations is the different use of these forces. A *cheng* force can turn into a *ch'i* force, and vice versa.<sup>61</sup>

T. E. Lawrence's definition is clearly the most fascinating. His ideas had an effect on Liddell Hart's military thought and therefore should not be neglected. He found in strategy and in tactics the same elements, algebraical, biological and psychological. The first is based on purely scientific matters and inorganic things like terrain appreciation. The second factor, beyond the arithmetical, is a breaking point, "life and death, or bodily and mental strain", bionomics. During the battle it came into being as an art touching every side of man's corporal being. Its components are sensitive and illogical. It embraces materials as well as men. The third factor, beyond the biological factor, is that science of propaganda. Therefore, the printing press is the greatest weapon in the armoury of the modern commander. Battles are lost and won in the mind of the commander, and the results are merely registered by his men.<sup>62</sup> Naturally, both Liddell Hart and Fuller were influenced by preceding military thought, but it seems that Liddell Hart had delved into the complexity and especially the dualism within Western military thought more closely and with passionate devotion.

## 2 THE EVOLUTION OF MANOEUVRE WARFARE THEORIES DURING THE INTERWAR PERIOD

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<sup>61</sup> O'Dowd, Edward and Waldron, Arthur: Sun Tzu for Strategists. In "Comparative Strategy", volume 10 1991, p. 27 - 30. Contrary to "traditional" western military thought, Sun Tzu's *Cheng* forces are smaller in number than *Ch'i* forces.

<sup>62</sup> T. E. Lawrence (from *The Evolution of a Revolt*) in *The Sword and the Pen*, p. 243. The biological element seems to be a creation of Lawrence's own approach to matters of leadership; In *The Seven Pillars of Wisdom* (the *Sword and the Pen*, p. 248), there are clear references to his attitude of underrating contemporary generalship. He accused British High Command of being ignorant of the reality of the battlefield, with soldiers tired, hungry and feeling cold. This made the reality to their eyes seem "sham". Lawrence is quite famous for being informal with the habit of wearing local dresses instead of the British Army field service uniform; Liddell Hart, B. H.: (1935b) "T. E. Lawrence" In *Arabia and After*. Alden Press, Oxford 1935, pp. 173, 376. Liddell Hart gave an example to clarify the mysterious biological factor. During Lawrence's Arab period, the Arabs, with the support of the brainwork of Lawrence, executed a strategy of material attrition. They then severed the line of communications at the movement when it became the life-and-death-line. These measures of logistics destruction influenced the men indirectly. Therefore the biological factor embraces materials as well as men.



“The disciplined acceptance of traditional values and of traditional solutions is the natural product of a military environment.”

Michael Howard

Before getting into the theme of warfare theories and the theorist, it is important to investigate the general considerations of war during WW I, because it influenced heavily the interwar military thought in Europe as a whole. Throughout Europe, in the decades before WW I, there were a general belief that a long and large-scale conflict would be financially impossible. The cost of armament, even in times of peace, was tremendous.<sup>63</sup> That is why only few people, if any, expected the next European war to last for two years, and certainly even less would have ventured to guess that it would drag on for four or six years.<sup>64</sup> As always, there are some rare instances that do not follow the mainstream. Ivan S. Bloch was one of the few. He foretold over a decade before WW I that the improvements in small arms and artillery had increased the strength of defence. The zone of deadly fire had made the battles more stubborn and therefore more prolonged.<sup>65</sup> It was quickly discovered during WW I that mobility was reduced significantly when more men were firing more bullets and shells more efficiently. This led to a huge stalemate.<sup>66</sup>

The history of war has witnessed significant changes in arms technology. In WW I the mobility of all troops reduced significantly. Certainly, technological inventions have always played an important role in military affairs and WW I did not make an exception.<sup>67</sup> William S. Lind suggested that the “methodical battle” tactics (or systematical tactics) were adapted into the French, British and U.S. armies during WW I. The French entered the war expecting a war of manoeuvre, but the reality of the battlefield had forced the French and their allies to modify their doctrine. In principle, it was a method of synchronisation of the linear formations and movement with the firing rhythm of the artillery.<sup>68</sup> This war the Americans entered as novices and adopted these contemporary methods of the conduct of war from their European allies. It must kept in mind that the overall command of the British Army during WW I was totally

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<sup>63</sup> Hambridge, Robert: World War I and the short war assumption. *Military Review*, May 1989, p. 40.

<sup>64</sup> Hambridge, p. 36.

<sup>65</sup> Ivan Stanislavovich Bloch (from *Modern Weapons and Modern War*) in *The Pen and the Sword*, p. 179. Ivan Bloch published seven volumes under the title of *The Future of War in Its Technical, Economic and Political Relations* in 1898. He was also known as Jean de Bloch. Born in Poland in 1836 he was for most of his life an official of the railroad administration. He became an ardent advocate of universal peace and founded a Peace Museum in Lucerne, Switzerland.

<sup>66</sup> Reid, Brian Holden: Major General J.F.C. Fuller and the Problem of Military Movement. *Armor*, July-August 1991, p. 28.

<sup>67</sup> Creveld, Martin van: *Technology and War. From 2000 b.c. to the Present*. Brassey's 1991, p. 217.

<sup>68</sup> Lind, p. 5; Doughty, Robert A: *From the Offensive à Outrance to the Methodical Battle*. In *Manoeuvre warfare: An Anthology*. Novato CA 1993, pp. 294 - 295, 310.

unprepared for the command of a million men. Therefore, the outline plans concerning the battles ended up being too unsophisticated and best suited for Colonial warfare. Subordinates were left to fight their own battles without any significant acts of co-ordination between neighbours.<sup>69</sup>

The idea of gaining an early victory and winning the whole war as a result came from the Franco-Prussian and Russo-Japanese wars. In fact, these conflicts influenced military thinking the most before WW I. They also caused military thinkers to overlook the lessons of the American Civil War, which would have been important in the “next” great war. Understandably, the collapse of the French army during the Franco-Prussian War influenced French and also British military thinking before WW I. An intense propaganda campaign, partly orchestrated by the army, assured the French that they were superior to their foes in every way, with the exception of number of troops. The British expressed similar confidence in the French army and in the ability of their own small army to help in any future Franco-German clash.<sup>70</sup> In 1914 the British Expeditionary Force (BEF) consisted of a professional army of six infantry and one cavalry division, though these forces had largely expired before reserves were available from 1916 onward. Britain’s six divisions were just a drop in the ocean compared to the huge European armies, which possessed almost 100 divisions each.<sup>71</sup> Paradoxically, by the end of the war Britain finally had 80 infantry and eight cavalry divisions in active service.<sup>72</sup>

Tactical and strategic ideas flourished during the first post-war years in Britain. One reason for this was the national trauma of WW I experiences. Another reason was the relaxed atmosphere in which even hazardous ideas could be developed.<sup>73</sup> Nevertheless, it was not until 1932 that a committee was set up to gather the lessons from WW I.<sup>74</sup> For WW I generation the war itself was a supreme operational lesson, a diagnosis that “cemented the foundation of their visions of the future of war”.<sup>75</sup> The war was therefore the stimulus for their ideas and theoretical development, although ill-founded ideas of a “next” short war were

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<sup>69</sup> Strachan, p. 410.

<sup>70</sup> Hambridge, pp. 37 - 42.

<sup>71</sup> Strachan, p. 407.

<sup>72</sup> Bond (1980), p. 2. Of the total 80 divisions 12 were regular, 30 New Army, 21 Territorial Force, 10 Dominion, six Indian and one Royal Naval.

<sup>73</sup> Bond, Brian and Alexander, Martin: Liddell Hart and De Gaulle: The doctrines of limited liability and mobile defence. In *The makers of modern strategy from Machiavelli to the nuclear age*. Clarendon Press, Oxford 1990, p. 600.

<sup>74</sup> Howard (1974a), p. 91.

<sup>75</sup> Reid (1991), p. 27.

buried in France and England permanently. Notions of future attrition warfare and superiority of firepower were flourishing.<sup>76</sup>

As a British Tank Corps General Staff Officer, J. F. C. Fuller planned the first real tank battle at Cambrai in November 1917.<sup>77</sup> Naturally, tanks were spread evenly to attack infantry divisions and concentrated tank operations were not planned.<sup>78</sup> They still had a significant role to play. The tank attack achieved great success during the first day, but the British relied too early on their victory and were unprepared for the German counterattack. Unfortunately the whole plan was dominated by the ignorance of the tank's potential and mistrust to its capabilities: only 48 hours was given to this operation, because the British were trying to prevent unnecessary sacrifices if the attack proved to be a flop.<sup>79</sup> Still, the battle proved the effectiveness of massed tanks supported by the infantry in penetrating enemy defences.<sup>80</sup> Fuller considered carefully that there had been enough tanks to maintain momentum. Had someone driven the enemy's reserves elsewhere, the troops might have achieved a decisive breakthrough.<sup>81</sup> Fuller faced severe resistance in trying to convince the viability of his operation and later claimed that the true enemy of the Tank Corps was in the rear of it and not at its front.<sup>82</sup> It must be kept in mind that the battles of Cambrai and Amiens were considered by the British Army as battles of the future. Master-General of the Ordnance, Sir Hugh Elles was convinced that another war would begin where the last war had finished, with the tanks leading and aiding the infantry attack, so he tended to underrate the potential of the fast moving Armoured Forces.<sup>83</sup> The role of tanks as an auxiliary arm can be detected. As in FSR

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<sup>76</sup> Macksey, Kenneth: *The Tank Pioneers*. London 1981, p. 112.

<sup>77</sup> Macksey, p. 26; Guderian, Heinz: *Achtung – Panzer. The Development of Armoured Forces, Their Tactics and Operational Potential*. Brockhampton Press, London 1998 (the book was first published in Germany in 1937), p. 131. It seems that the battle in Amies on 8.8.1918 was a bigger tank operation than the previous British effort. The attack lacked depth and it was tied in too closely with the infantry and the Cavalry Corps and therefore lacked the speed that was needed to exploit the initial success.

<sup>78</sup> Guderian, p. 78.

<sup>79</sup> Galusha, Robert G.: *Cambrai. November 20, 1917*. In *Armor*, January - February 1965. Washington 1965, p. 7.

<sup>80</sup> Ailslieger, Kristafer: *The Battle of Cambrai*. *Armor*, September - October 2000, pp. 34 - 36. The attack involved six infantry divisions, five cavalry divisions (in reserve), and a spearhead of three tank brigades supported by over 1000 artillery guns and fourteen air squadrons.

<sup>81</sup> Carver, Michael: *The Apostles of Mobility. The Theory and Practice of Armoured Warfare*. London 1979, p. 31. Breakthrough in British military terminology means penetration all the way through and "exploitation" to make the penetration of the adversary's position more decisive. A break-in would be a penetration partly through a defensive position.

<sup>82</sup> Fuller, J. F. C.: *Possibilities of the Tank*. In *The Journal of Army Ordnance*, number 74, vol XIII, September - October 1932. Washington 1932, p. 77.

<sup>83</sup> Bond (1980), p. 177; Macksey, pp. 104 - 105.

(1924), it was determined that tank units were responsible for maintaining the connection between infantry and tanks.<sup>84</sup>

Liddell Hart, a veteran of WW I, came to revolutionize and dominate the whole field of British military thought until WW II. As a young captain Liddell Hart was gassed and wounded during the offensive in Somme during July 1916. His 9th King's Own Yorkshire Light Infantry was wiped out in one day. That day cost the British the heaviest day loss in British history<sup>85</sup>, so it is no wonder that Liddell Hart and his contemporaries eventually turned their potential to finding easier and less bloody solutions to the way of fighting.<sup>86</sup> After being disabled for service at the front, he was sent to take charge of the training of a volunteer battalion. This led him to analyse what infantry should do in the battlefield.<sup>87</sup> It is also vital to recognise that Liddell Hart, seventeen years younger than Fuller and far less experienced as a soldier, was only a junior partner on the issues considering the mechanisation until the late 1920s.<sup>88</sup> As an infantry officer he was totally ignorant of the mechanisation process or the usability of armoured forces. This is why Liddell Hart admitted the superiority of Fuller in the theories of mechanisation during WW I.<sup>89</sup> Their correspondence constitutes probably the greatest exchange of evolving ideas in the history of warfare. They read the drafts of each other's books since the early 1920s, commented on them and ranged widely over the prevailing military issues of the day.<sup>90</sup>

It is essential to pay attention to the fact already mentioned that Liddell Hart's and Fuller's main ideas were based on the experiences of WW I. As a result they both became extremely critical of the allied commanders who conceived human-wasting tactics during the 1920s. It could be argued that WW I had been a major catastrophe on a worldwide scale and it had been conducted ineptly.<sup>91</sup> As Liddell Hart and Fuller were convinced that there would soon be another great war, they were obsessed with learning lessons from the previous one. This is

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<sup>84</sup> Field Service Regulations. Volume II, Operations. The (British) War Office, London 1924, p. 144.

<sup>85</sup> Bond (1977), p. 17. Bond claims that the total number of casualties were nearly 60 000; Reid (1990), p. 65.

<sup>86</sup> Bond (1977), pp. 9, 18; O'Neill, Robert: Liddell Hart and His Legacy. In of King's College London Liddell Hart Center for Military Archives Lecture, 19.05.1988 [referred to 20.6.2000]. Available at <URL:<http://www.kcl.ac.uk/lhema/info/lec88.htm>>, p. 4.

<sup>87</sup> Carver, Michael: Conventional Warfare in the Nuclear Age. In The makers of modern strategy from Machiavelli to the nuclear age. Princeton University Press 1990, pp. 40 - 41.

<sup>88</sup> Bond - Alexander, p. 598.

<sup>89</sup> Liddell Hart's letter to Fuller 11 March 1928, quoted in Bond (1977), p. 30.

<sup>90</sup> Reid (1990), p. 65; Bond (1977), p. 27.

<sup>91</sup> Reid (1990), p. 65; Freedman (1997).

why for Liddell Hart or Fuller WW I was not “the war to end all wars”.<sup>92</sup> As a repetition of the earlier Imperial wars, during the Boer war the process was also in this occurrence much the same: initial disasters, severe problems to handle the logistics and problems in adapting existing tactics to new circumstances.<sup>93</sup>

Marshal Maurice de Saxe stated that the standard character to conduct troops methodically under the orders of a higher officer reduced the value of subordinate officers. His book *Reveries on the Art of War* became a military classic of the eighteenth century. In an age of strict regularity and pedantry he introduced irregularity and freedom from custom as a method of military affairs. He turned immobility to new type of mobility. He abandoned the prevailing theories of war because they were not based on any examination of the principles on which they were founded.<sup>94</sup> Fuller and Liddell Hart expressed similar unorthodox methods, as the conception of military operations in terms of “attack” and “defence” was fatal. Inflexible organisations and tactics fettered too schematic diagrams and plans. A prudent *mélange* of the offensive and defensive ensured the success of armoured warfare.<sup>95</sup> Despite this, in FSR (1935) the differences between defensive and offensive actions are quite noticeable. It was said in it that during the defensive battle “decision is sought by a predetermined counter-stroke - which is really an offensive and not a defensive battle”.<sup>96</sup>

Liddell Hart and Fuller seemed to be eager to use Jomini’s text in their own context, though they did not admit to the influence. The most important maxims quoted from Jomini were the following:<sup>97</sup>

- 1 To throw by strategic movements the mass of an army, successively, upon the decisive points of a theatre of war and the enemy communications without compromising one’s own. Armies have been destroyed by strategic operations without the occurrence of pitched battles.
- 2 On the battlefield, to throw the mass of the forces upon the decisive point, or upon that portion of the hostile line which it is of the first importance to overthrow.

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<sup>92</sup> Reid (1990), p. 65. It must be kept in mind that, like German and French troops, the British troops suffered heavy casualties during WW I.

<sup>93</sup> Howard (1974a), p. 11 - 12.

<sup>94</sup> Maurice De Saxe (from *Reveries on the Art of War*) in *The Sword and the Pen*, pp. 91 – 92; Liddell Hart (1935b), pp. 160 – 161.

<sup>95</sup> Reid (1991), p. 29.

<sup>96</sup> Field Service Regulations (1935), p. 49.

Liddell Hart was quite productive. Between 1925 and 1939, the year of his resignation, he wrote hundreds articles and published 18 of his eventual 31 books. His main concern was to form an adequate and as truthful an overall picture as possible. He aspired to find the genuine “truth”, sometimes even with a desperate method, as will be expressed later in this study.<sup>98</sup> I soon found out that Liddell Hart was more interested in the operational aspects of battlefield rather than its theoretical dimensions. Liddell Hart’s and Fuller’s voluminous writings did not include any close examination of the Army’s financial restraints and the Army’s handicapped role between the political and military authorities in War Office.<sup>99</sup> However, Liddell Hart dealt with these issues in the late 1930s (see further).

## 2.1 Two Apostles of Armoured Warfare

“The main essential to success in battle is to close with the enemy, cost what it may”

Infantry Training (1914)<sup>100</sup>

The battle of Cambrai started a new phase in the history of warfare. It is difficult to define Fuller’s influence on the process of mechanisation and on theoretical innovations. Fuller was by no means the first apostle in the area of mechanised warfare. Captain Le Q. Martel, a tank staff officer, wrote as early as in November 1916 a paper entitled “A Tank Army”. He claimed that “no present-day army could fight against an army of say 2000 tanks”. The original idea of tank armies as fleets fighting on land was a product of his mental activity. Fuller underrated his ideas during WW I and considered tanks to have a tight bond with infantry.<sup>101</sup> The apostle’s title is mainly based on his tremendous, distinctive contribution to the development of tank organisations and the tactical use of armoured forces. In addition, his impressive contribution to the literature associated with armoured warfare made him renowned all over the West.

The battle of Cambrai had some elements of originality, but mainly its value laid in the effect of surprise. No preliminary artillery bombardment was attempted, and the Germans did not

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<sup>97</sup> Antoine Jomini (from Summary of the Art of War) in the Sword and the Pen, p. 145.

<sup>98</sup> Liddell Hart, B. H.: Why Don’t We Learn From History. London 1972. First published in Great Britain in 1944, p. 15.

<sup>99</sup> Bond (1980), p. 127.

<sup>100</sup> Quoted in Reid (1994). The First World War.

<sup>101</sup> Messenger, Charles: The Blitzkrieg story. New York 1976, p. 15 - 16.

expect the British to attack without the usual preparations.<sup>102</sup> After firing hundreds of thousands of shells into the enemy defensive positions, the zone would have been much more difficult to cross. Besides, the preliminary bombardment would have costed millions of pounds.<sup>103</sup> Its value was more in bringing forward the possibilities of mechanised warfare than as a military success as such. Fuller went perhaps too far by alleging that WW I was won by motorised weapons and vehicles, but some important experimental innovations were certainly achieved. Fuller emphasized the impact of industrialization and the overall scientific improvements in modern warfare.<sup>104</sup>

Fuller's next plan called "Plan 1919" is defined as revolutionary. He described the influence of tanks in tactical and strategic fields of the art of war. Strategically the importance of roads, railways, rivers and canals was important in maintaining communications. Modern armoured forces could easily strike at these important links quickly, saving time and blood.<sup>105</sup> He called this type of manoeuvre "swift penetration". The indecisive frontal attacks were to be left in history.<sup>106</sup> "Plan 1919" was to be a strategic surprise attack on the western front on a ninety-mile width. Although the attack was designed to penetrate thirty kilometres into the enemy territory, its intention was to paralyse German divisional, corps and army headquarters. In addition, it was to disorganise enemy reserves in a way Napoleon Bonaparte did before he broke his enemy's front.<sup>107</sup> The effect of "swiftening" was to be achieved by the tanks supported by artillery and infantry. The purpose was to split the adversary's defence lines into ineffective sectors unable to organized resistance. Therefore, Fuller called the whole concept a "morcellated attack".<sup>108</sup>

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<sup>102</sup> Dyster, p. 98.

<sup>103</sup> Fuller (1932), p. 82. Fuller had calculated that the preliminary bombardment at Ypres had cost £22 000 000. For this sum over 4000 tanks would have been built. I did not inspect his calculations.

<sup>104</sup> Fuller, J. F. C.: *Mechanization and Realization*. In *The Journal of Army Ordnance*, number 56, vol X, September - October 1929. Washington 1929, p. 90.

<sup>105</sup> J. F. C. Fuller (from *Memoirs of an Unconventional Soldier*) in *the Sword and the Pen*, p. 228 – 232; Winton, pp. 15 – 16. Fuller requested that the tank should reach the speed of 20 miles per hour, with a radius of action of 200 miles.

<sup>106</sup> Swinton, p. 19. The idea was presented in the RUSI, Gold Medal Essay.

<sup>107</sup> J. F. C. Fuller (from *Memoirs of an Unconventional Soldier*) in *the Sword and the Pen*, pp. 228 – 233; see also Järvinen, Y. A: *Panssarijoukot ja venäläinen panssaritaktiikka*. OTAVA, Helsinki 1937, p. 41. According to Järvinen, the attack was to take place in three waves. The first wave would consist of light tank troops penetrating 20 km. The second wave would consist of heavier tanks and infantry. Their aim would be to fix the enemy in the front line. The third wave would consist of tank troops and cavalry, the aim of which would be 75 km deep.

<sup>108</sup> Troops were subdivided into sections, which best indicated their ability of locomotion. The "Morcellated" signifies splitting, cleaving or chopping in the French language (*morceler*). Finnish translation would be "halkoa, paloittaa, lohkoa, jakaa".

It is plausible that the “Plan 1919” was improved in his mind after the war. He tried, perhaps too narrowmindedly, to direct the evaluation of tank forces after WW I into the success of “Plan 1919”, which he saw as a prototype of the modern combat situation. The main problem was apparently to convince the British Army General Staff and the War Office to support his sustained reforms concerning the Army organisation and technical improvement.<sup>109</sup> In the eyes of many military thinkers, the plan never achieved the status of full-fledged legitimacy, because it was never implemented.<sup>110</sup> Fuller himself welcomed the idea that his “Plan 1919” contained seeds of the German *Blitzkrieg* (literally lightning war).<sup>111</sup> The difference between modern ideas of manoeuvre warfare and WW II German *Blitzkrieg* is a quite confusing matter. Richard Simpkin did not underline the similarities between these concepts, nor did he separate them. Nevertheless, the lightning war idea was based either on strategic or operational surprise, with the use of force into depth, beyond the enemy reserves, while avoiding battle. If one side has the capability to launch a *Blitzkrieg*, deterrence is likely to fail (as in France during the summer of 1940). This would dislocate the enemy force physically and shatter its commanders psychologically.<sup>112</sup> The German operation is presented in Appendix 4 (figure 2). Both “Plan 1919” and the German operation of 1940 are extremely important to my frame of reference and therefore I will be quoting these operations several times through my study.

For Fuller, the organization was an instrument for a force threefold in nature: mental, moral and physical.<sup>113</sup> From my point of view, Fuller’s attempt in the area of scientific explanation ends up as a total hotchpotch. According to Fuller, a modern army had three tactical functions: to move, to hit and to guard.<sup>114</sup> Therefore, three types of forces were needed, namely protective, close combat and pursuit troops.<sup>115</sup> To the official tank manual considering war situations, these principles were presented even as characteristics of any armoured vehicle. The exact words were “fire power, mobility and protection”. Fuller also saw that the

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<sup>109</sup> Macksey, p. 43.

<sup>110</sup> Dyster, p. 131.

<sup>111</sup> Fuller, J. F. C.: *The Second World War 1939 – 45. A Strategical and Tactical History*. Eyre and Spottiswoode, London 1948, p. 37.

<sup>112</sup> Simpkin (1986), p. 30; Liddell Hart, B. H.: *The Defence of Britain*. Fourth impression. Latimer Trend & Co Ltd Plymouth, November 1939, p. 101. The concept of *Blitzkrieg* was born before the Second World War. In German military literature was “lit up with the theme”.

<sup>113</sup> Fuller, J. F. C.: *Armoured War. An Annotated Edition of Fifteen Lectures on Operations between Mechanised Forces*. London 1943, p. 104.

<sup>114</sup> Reid (1991), p. 29.

<sup>115</sup> Fuller, J. F. C.: *The Foundations of the Science of War*. London 1925, p. 92. There should also be three systems of maintenance, supply, repair and transportation. Three means of control were also needed; control, decision and communication.



effective use of armoured vehicles necessitated changes in organisation and tactics. In his different forms of attack, he clearly emphasises these tactical functions. There was always one unit in a guard mission and two in a movement situation ready to attack the enemy from the flank direction at his back. The suitable tank formations of a tank section from the Armoured Car and Tank Training manual (1927)<sup>116</sup> were not at all similar to those battle formations and manoeuvre ideas presented in Fuller's books.<sup>117</sup> The whole idea of the Armoured Car and Tank Training manual was to standardise the movement and the battle of Tank Company. To the tank battalion commander it gave the principles of cooperation. The images of this manual did not respond to the problem of how to affect the enemy and how to use manoeuvre tactics to suppress the enemy.<sup>118</sup>

Both Liddell Hart and Fuller saw wars as an inseparable part of social and political behaviour,<sup>119</sup> and that is why they also spent a good deal of time to ensure that wars should be fought as humanely as possible. Consequently, both Fuller and Liddell Hart believed that greater weapon power would reduce the need for large armies and would be based on professional soldiers. Future armies would and were to be small, with a high degree of unity, spirit and professional skill.<sup>120</sup> Especially Liddell Hart attacked the idea of the nation-in-arms. He did not agree with the idea of mass-conscripted armies, which had replaced military skill with number.<sup>121</sup> The tradition of mass armies, the nation in arms, had its origins in the Napoleonic wars. Indeed, he argued that WW I ended as it did because of the vulnerability, immobility and logistic demands of large mass infantry armies. Therefore, to Liddell Hart it was a matter of great importance to restore the art of war by high-quality armored troops.<sup>122</sup> The ideas of "citizen armies" had ascended from the writing of Montesquieu, Rousseau and Mably.<sup>123</sup> Fuller would have liked Britain to have a small, highly organised army of some

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<sup>116</sup> Tank and Armoured Car Training. Volume II: War. The (British) War Office, London 1927, p. 39, Plate I, Figs. I and 2. Suitable manoeuvre formations for a tank section in battle were "the diamond", "the echelon" and "the triangle".

<sup>117</sup> Fuller (1943), p. 49.

<sup>118</sup> Tank and Armoured Car Training (1927), Plate II - VI.

<sup>119</sup> Bond (1977), p. 33

<sup>120</sup> Reid (1990), p. 65.

<sup>121</sup> Liddell Hart, B. H.: Paris or the Future of War. London 1925, p. 15.

<sup>122</sup> Swain (1990), p. 41.

<sup>123</sup> Palmer, R. R.: Frederic the Great, Guibert, Bülow: From Dynastic to National War. In Makers of Modern Strategy. From Machiavelli to the Nuclear Age. Edited by Peter Paret. Clarendon Press, Oxford 1990, p. 107. One must bear in mind that the true reason for training the citizens of a country was to safeguard them against the tyranny of their own governments.

30000 persons.<sup>124</sup> Traditionally the British Army had been small, avoiding a commitment on mainland Europe. It had been prepared to fight “small wars” against poorly armed and organised opponents.<sup>125</sup>

I fully agree with Brian Bond’s five categories of attitudes on mechanisation during the interwar period, though the idea of putting persons into pigeonholes according to the criteria of their thoughts is perhaps too simplified. First, there were the revolutionaries who insisted that the tank would dominate future land warfare, like Fuller, Charles C. N. F. Broad<sup>126</sup>, Percy C.S. Hobart and Giffard Le Q. Martel<sup>127</sup>. The second category may be called reformers<sup>128</sup>, who supported the revision of the tactical doctrine, but their means were not as drastic as Fuller’s. One of the most important is definitely George M. Lindsay<sup>129</sup> and in my own estimation also Liddell Hart himself. The third and very large group may be termed progressives. The majority of this group was lieutenant colonels and majors in 1918 and they rose to high command in the late 1930s. These officers accepted the reform of tactics, which was still based on WW I trenches. Still, most of them remained sceptical about the ideas of the mechanised warfare advocates until at least the later 1920s. Despite this, they “tended to stress the numerous problems and uncertainties. How would armored forces be supplied and repaired when far from base?”<sup>130</sup> The fourth category may be termed conservatives. They were not opposed to mechanisation but disapproved of the concept of independent armoured formations. They welcomed tanks as infantry support weapons. The fifth and final category was the true reactionaries.<sup>131</sup>

There are some basic differences between Fuller’s and Liddell Hart’s thoughts, despite their considerable consensus on the details of mechanical warfare. Fuller asserted during the early 1920s that the tank could completely replace the infantry and cavalry. Even artillery guns

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<sup>124</sup> Fuller (1943), p. 35. Fuller knew that no British Government would maintain such an army during peacetime.

<sup>125</sup> McInnes, p. 3.

<sup>126</sup> Bond (1980), p. 383. Broad served in Tank Corps in 1917, Commandant Tank Gunnery School 1924 - 1927, Commander of Armoured Brigade in 1931 exercise.

<sup>127</sup> Bond (1980), p. 391. Martel served in agreement with the Army mechanisation, as a General Staff Officer in Tank Corps 1917 - 1918. Assistant Director of Mechanisation in War Office 1936 - 1938 and a Commander of Royal Armoured Corps in 1940. He retired as a Lt.-Gen in 1945.

<sup>128</sup> Notable in this group were Colonel George Lindsay, Colonel Henry Karlake and Major B. C. Dening.

<sup>129</sup> Bond (1980), p. 391. Lindsay served in the in Armoured Car Group in Iraq from 1921 to 1923. Chief Instructor and later Instructor in Tank Corps from 1923 to 1929. General Staff in Egypt from 1929 to 1932 and a commander of Mobile Force in 1934. He retired in 1939 as a Major General.

<sup>130</sup> Bond, Brian and Alexander, Martin, pp. 600 - 601.

should also be mounted on “a kind of tank”. During the Battle of Cambrai the infantry troops had fallen behind, and it was testified that these delays caused the collapse of the whole attack. Therefore, Fuller soon became convinced that all infantry had to be motorised and preferably armoured, “foot soldier is in fact a thing of the past”. The other component needed was the armoured self-propelled antitank as a tank destroyer (Germans adopted this idea later during the late 1930s and early 1940s). Fuller developed further the analogy of tanks as battleships of a new era of fluid land operations. The role of the infantry was merely to occupy the territory won by tanks. Soldiers would be divided into two categories of first and second degrees: those who did the fighting, and those who did the occupying. To Fuller, combining tanks and infantry was “tantamount to yoking a tractor to a draught horse”.<sup>132</sup>

In contrast, as a former infantryman, Liddell Hart continued to emphasize the role of the infantry also in future battlefields. He also saw the need for a more mobile type of infantry. He developed the idea of the “tank marines” which would be transported with armoured vehicles. As a repetition of Fuller’s ideas, artillery pieces should also be motor-drawn or motor-borne.<sup>133</sup> This distinction between Liddell Hart’s “land-marines” and Fuller’s “Sea Warfare on Land” had accentuated to posterity studies, though I would keep this distinction to more open interpretation.<sup>134</sup> Liddell Hart did similar use the idea of “naval war”, but as the tactics of tank versus tank campaigns. Nevertheless, the “land marines” and heavy artillery would follow the “quick-moving and quick-hitting” forces, establishing chains of fortified bases.<sup>135</sup> Therefore, the accusation that Fuller was against any infantry formation within tank formations was based merely on his thoughts in the early 1920s.<sup>136</sup> Fuller continued to be the chief spokesman of the advocates of mechanization throughout the 1920s.<sup>137</sup>

Some of Fuller’s successors followed closely his ideas; others combined the ideas of Fuller and Liddell Hart. According to Percy Hobart, a tank thrust should be pushed at a high speed at a vital point using the “line of least resistance”. The primary function of the Tank Corps was to make deep strategic penetrations. He felt that the infantry was an encumbrance to

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<sup>131</sup> The most important officers in this category were General Egerton and Brigadier Neil Haig (the Field Marshal’s cousin).

<sup>132</sup> Fuller (1943), p. 14, 19; Bond (1980), pp. 29, 43, 136; See also: Messenger, p. 43. Fuller considered the role of infantry merely as “fortress troops”.

<sup>133</sup> <sup>133</sup> O’Neill, Robert: Liddell Hart unveiled. *Army Quarterly & Defence Journal* 120 (1990) 1:7 - 12 ½, p. 12; Bond (1977), pp. 29, 43.

<sup>134</sup> Swain, p. 225.

<sup>135</sup> Liddell Hart (1925), p. 87.

<sup>136</sup> Fuller (1929), p. 94.

<sup>137</sup> Bond and Alexander, p. 601.

quick tank brigades and they were totally capable of executing missions independently.<sup>138</sup> There would be no logistics problems, because troops could “live on the country”, originally an idea of de Guibert, later presented by Liddell Hart. What was needed was petrol, oil and very little food, all or which are local “in any (even semi-) modern countries”.<sup>139</sup> Liddell Hart was not convinced that British Army could rely on such methods, though some influences ought to be scrapped in order to reach some spirit of General William Tecumseh Sherman’s manoeuvre during the American Civil War (see Appendix 4, figure 1).<sup>140</sup> The deep strategic penetration in the “Plan 1919” signified a 30-kilometre thrust. In the mid-1930s the prospective targets of the Tank Brigade were headquarters, supply installations and airfields, about 100 *kilometres* behind the lines.<sup>141</sup> Liddell Hart himself visioned the range of deeps strikes more like 250-300 *kilometres*, though they would be “out-and-back” journeys. Liddell Hart fitted his ideas to predominant tactical ideas. No suggestion of manoeuvres like “Sherman’s march” appeared.<sup>142</sup> Sherman “showed the way back to mobility by a ruthless scrapping of transport and equipment.” He entered the American Civil War as infantry colonel of the Federal Army and he was responsible for taking of Atlanta. In October 1864 he set out on his “March to the Sea”, reaching Savannah at the end of the year, destroying the resources at the heart of the South, cutting of adversary army’s supplies and finally received the surrender of the South, which virtually ended the Civil War.<sup>143</sup>

Sherman had realized that the growing industrialization and the trend toward centralization had increased the value of economic and moral targets. This in turn increased the incentive to strike at the sources of the adversary’s armed power, instead of striking at its shield, the armed forces themselves. The war between democracies and especially people depended more clearly on the strenght of the people’s will than on the strenght of its armies. In Europe, wars were waged between kings or rulers through hired armies and not between peoples. Sherman

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<sup>138</sup> Macksey, pp. 127, 139; Winton, p. 177.

<sup>139</sup> A letter by Percy Hobart to George Lindsey in 1925. Quoted in Macksey, p. 126; Palmer, p. 109. Guibert visioned that an army that travels light and lived on the country, will eventually gain mobility, the range of action and the power or surprise.

<sup>140</sup> Liddell Hart, B. H.: Mobility or Stagnation. In “Infantry Journal”, January – February 1932, Journal of the United States Infantry Association, p. 5.

<sup>141</sup> Winton, p. 179.

<sup>142</sup> Liddell Hart: Maneuvers of the British Tank Brigade. Observation on the 1932 Exercises of an Army in a New Formations. In The Journal of Army Ordinance, number 76, vol XIII, January – February 1933. Washington 1933, pp. 220–225, p. 225.

<sup>143</sup> Liddell Hart, B. H.: A Greater than Napoleon. Scipio Africanus. Great Britain 1930, p. 263; Liddell Hart (1932), p. 5; Liddell Hart, B. H.: The Revolution in Warfare. Faber and Faber Ltd, London 1946, p. 12; Liddell Hart, B. H. (1960b): Deterrence or defence. A Fresh Look at the West Military Position. Stevens & Sons Limited, London 1960, p. 190.

permitted the conquered section a good treatment and aided its recovery.<sup>144</sup> Russell F. Weigley underrated Liddell Hart's interpretations about Sherman's military ideas. According to Weigley, Sherman, like his superior officer Ulusses S. Grant, tended to give first priority to the disposal of the enemy army. Anyway, Sherman was not able to reach the areas behind the enemy until those armies had been "substantially" destroyed.

According to John J. Mearsheimer, Liddell Hart became hostile to the service and its high command in 1924 when he retired from the army. He even claimed that Liddell Hart had become an archcritic of war and particularly of British generalship by the 1930s.<sup>145</sup> It is quite evident that Liddell Hart seemed to be disillusioned by his period as a military correspondent. He found most persons of the Higher Command too keen on helping their own advancement at his expense.<sup>146</sup> Naturally, Liddell Hart's constant championship of armoured warfare gave the impression that no matter how qualified these men actually were, he still attempted to "manoeuvre" them into position of authority. Besides, he failed to consider the political realities that influenced military decisions and that the constant accusations of the British Army High Command were actually decreasing the value of his ideas. There might be some truth in the phrase "the cobbler should stick to his last", when considering his active excursion in the field of grand strategy during the interwar years. Nevertheless, his military knowledge was sound especially in his emphasis on mobility and flexibility and on tactical quality as opposed as quantity.<sup>147</sup> After having experienced serious problems in carrying through his ideas in the British Army, Fuller suggested that since democracies were unwilling to carry out essential military reforms, a more authoritarian system might be necessary. Fuller was finally driven into the hands of Sir Oswald Mosley and his Fascist movement in Britain after retiring with the rank of Major General in 1933.<sup>148</sup>

## 2.2 The Tactical Level Thoughts

"The influence of thought on thought is the most influential factor in history"

Basil H. Liddell Hart, 1933.

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<sup>144</sup> Sherman, William T.: Letter to Major R. M. Sawyer, January 1864. Quoted in *The Sword and the Pen*, pp. 164 – 165; Liddell Hart (1972), pp. 75 – 76.

<sup>145</sup> Boyd, Carl: Review: A New Critic and the future of Liddell Hart. *Military review*, March 1989, p. 78.

<sup>146</sup> Liddell Hart (1972), p. 28 – 29.

<sup>147</sup> Winton, p. 205.

<sup>148</sup> Bond - Alexander (1990), p. 602; Fuller, J. F. C.: *The Conquest of Red Spain*. London 1937, pp. 5 – 6. Later Fuller criticised Britain's policy of not supporting General Franco during the Spanish civil war in 1937

Liddell Hart's military theories developed progressively from the 1920s onward. According to Harold Winton, there were two separate periods inside Liddell Hart's mechanisation ideas. The first contained the ideas of general mechanisation of divisional and battalion transport. He tried to show how each transport service could be mechanised. This transitional phase was soon mingled with the armoured period, though the impact of the first episode has remained significant ever since. After devising infantry tactics, Liddell Hart finally broadened his scope to strategic ideas. Liddell Hart's military thought seemed to be a chronological complementary entity from the interwar to the postwar period. He began from his formulation of infantry tactics after WW I. His theories or concepts of the "Man-in-the-Dark" and "Expanding Torrent" are his famous ideas concerning infantry tactics. These ideas got a wider aspect as they were amalgamated into both tactical and strategic level thoughts of indirect approach. These ideas were published in military journals and after Lt. Gen. Sir Ivor Maxse (former Inspector General of Training in France) recognized the value of this young captain, his theories were published as Royal United Services Institution (RUSI) lectures.<sup>149</sup> The gap between tactics and strategy appeared to be a matter of awkward threshold, because the practical viability of eighteenth century warfare theories was useless when adapted into the modern, early twentieth century conditions.

The "Man-in-the-Dark"-theory provided the tactics of encirclement. The idea was the situation of an unarmed man confronted by a single unarmed opponent. The man seeks his enemy in the dark by stretching out one arm in order to grope at his enemy (Discover). After touching his adversary, he finds the way to the latter's throat or collar (Reconnoitre). As soon as he has reached it, he seizes him so that he cannot strike back (Fix). Then with his other fist he strikes his enemy, who is unable to avoid the decisive knockout blows (Decisive Attack). He finally follows up his steps of advantage to render his adversaries (Exploit).<sup>150</sup> The first was to fix and disorganise the opponent, while the second performed a manoeuvre against the enemy's rear.<sup>151</sup> Any operation was to be conceived carefully as an intellectual entity. Each battle was to be regarded as a stepping stone to the successful conclusion of the war.<sup>152</sup> Since the slow-moving infantry was a too vulnerable target for modern fire-weapons, it was

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<sup>149</sup> Winton, p. 19 – 21.

<sup>150</sup> Liddell Hart: *The Essential Principles of War and their applications to the offensive infantry tactics of today*. United Service Magazine, April 1920 pp 30–44. Quoted in Bond, p. 24. Auxiliary firepower ment artillery, machine guns, tanks and "land fighting aeroplanes"; Irwin (1993), pp. 68 – 69. Irwin interprets the engagement to end up **by the capitulation of** the enemy. This conclusion is probably based on Liddell Hart's "human saving" methods that appear in his texts.

<sup>151</sup> Swain (1990), p. 45.

<sup>152</sup> Reid (1991), p. 31.

essential to rely on tracked movement and the “machine-made skin”.<sup>153</sup> Both Fuller and Liddell Hart insisted on the manoeuvre of the units of firepower instead of units of cannon fodder. On the other hand, the units would be small, but they should be supported by masses of auxiliary firepower.<sup>154</sup> The concentration of armoured forces against the Achilles heel (or centre of gravity)<sup>155</sup> of the enemy army would make an effective punch. For Liddell Hart, only the most stupid boxer would attempt to “beat his opponent by battering the latter’s flesh until at last he weakens and yields”. The victorious boxer, therefore, after winning his stake by a quick and powerful “punch” did not need to worry about the period of convalescence.<sup>156</sup>

Liddell Hart pointed out quite vigorously that manoeuvre was the key to victory, but without units of firepower it was not possible. To reach these desired effects no mass of cannon fodder was necessary.<sup>157</sup> Liddell Hart described the duality of effects also more universally as one energy divided into two parts. The fixing part was as indispensable as the decisive attack. A fixing attack should be on the broadest possible front in order to occupy the enemy’s attention and prevent him from turning to meet the decisive blow elsewhere.<sup>158</sup> Henry Lloyd had been in favor of coming to a decision by decisive action, but at same time had warned that “the success of such enterprises depends entirely on the vigour of your operation: if they in the beginning are not decisive, they never will be so hereafter”.<sup>159</sup> In other words, decisive battles should also be operationally decisive, not just means of more destruction. Operation lines should be planned wisely for reaching the final target more easily and at the same time saving precious resources.

Liddell Hart’s ideas came mainly from the German infiltration tactics from WW I, which sought to paralyse the enemy force by attacking their vulnerable rear areas by using elite forces known as Storm troops. Initially, it was a tactical novelty developing into infiltration

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<sup>153</sup> Liddell Hart, B. H.: *The Remaking of Modern Armies*. London 1927, pp. 69, 71.

<sup>154</sup> Liddell Hart, B. H.: *The Essential Principles of War and Their Applications to the Offensive Infantry Tactics of Today*. *United Service Magazine*, April 1920, pp. 30 - 44. Quoted in Bond, p. 24. Auxiliary firepower meant artillery, machine guns, tanks and “land fighting aeroplanes”.

<sup>155</sup> Achilles, when a child, was dipped by his mother, Thetis, in the waters of the river Styx. His whole body became invulnerable except for the heel by which Thetis held him. Paris based his stratagem on this vulnerability and his arrow, guided by Apollo, struck Achilles in his heel; *Design for Military Operations - The British Military Doctrine* (1989), p. 84. The concept of centre of gravity stems from the interpreters of the Napoleonic system. Clausewitz suggested that the centre of gravity was “the hub of all power and movement, on which everything depends... the point at which all our energies should be directed”.

<sup>156</sup> Liddell Hart (1925), pp. 81 - 82.

<sup>157</sup> Liddell Hart: *The Essential Principles of War*. *United Services Magazine*, April 1920, p. 35. Quoted in Irwin, p. 69.

<sup>158</sup> Liddell Hart (1930), pp. 35, 43.

<sup>159</sup> Lloyd (1766), preface.

tactics.<sup>160</sup> Unfortunately, the Germans had lacked the means of exploiting the initial break-in and effecting a more crucial breakthrough for strategic penetration.<sup>161</sup> The infiltration tactics were a clear indication of the Germans' ability to achieve prominent and truly original doctrines. The main idea was not to kill enemy soldiers as such, but to eliminate units as a whole. Liddell Hart likened this type of attack to torrents, but added some tactical ideas into this concept in order to produce the breakthrough:

“Eventually it (torrent) finds a small crack at some point. Through this crack pour the first dribbles of water and rush straight on. The pent-up water on each side is drawn toward 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.”<sup>162</sup>

The “Expanding Torrent” -theory<sup>163</sup> contained “in the attack an automatic and continuous progressive infiltration by combat units”. The action was directed to disorganised and surprised support groups, rather than to the enemy's strong points. This method of reinforcing the success was contrary to the British method of attack where the failure was reinforced. The disastrous effect of German infiltration tactics on morale was significant especially where such attack was not expected. This manoeuvre approach over tactics of attrition was truly an innovative masterpiece. It had a stunning impact on German manoeuvre ideologies in the era of armoured vehicles.<sup>164</sup> Liddell Hart based almost all his methods of battle around this German tactical solution. He visioned the tanks as ideal agents of infiltration of “soft spot – tactics”.<sup>165</sup>

The impact made by masses of flowing water is far more important than the individual water molecule that is trying to find its way through obstacles. I agree with Harold Winton's suggestion that the military idea was based on the ideas of using reserves. Each penetrating unit would continue to move forward as long as it had a reserve behind it.<sup>166</sup> Actually, Fuller had pointed out that the inability to continue the attack during the battles of Cambrai was due

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<sup>160</sup> Leonhard, Robert R.: *The Art of Maneuver. Maneuver-Warfare Theory and Air Land Battle*. Novato CA 1991, p. 75; Leonhard, Robert R.: *Maneuver Warfare and the United States Army*. In *Maneuver Warfare. An Anthology*. Edited by Richard D. Hooker, Jr. Novato CA 1993, pp. 42–56, p. 43; Bond (1977), p. 25. Storm troops were armed with light machine-guns, light trench mortars and flame-throwers. Their task was to penetrate so deeply that they could attack the enemy's artillery.

<sup>161</sup> Mearsheimer, p. 32.

<sup>162</sup> Liddell Hart: “The Man-in-the-Dark” *Theory of Infantry Tactics and the “Expanding Torrent System of Attack”* JRUSI 66 (February 1921), p. 13. Quoted in Winton pp. 19 – 20.

<sup>163</sup> A Finnish translation could be something like “laajeneva vuoripuro”

<sup>164</sup> Dyster, pp. 105 – 108, 111; Carver, p. 41; Lind, pp. 6 - 7.

<sup>165</sup> Liddell Hart (1933), p. 221.

<sup>166</sup> Winton, p. 20.



to the lack of reserves.<sup>167</sup> In addition, in lieu of just infiltration effect, Liddell Hart saw the constant continuation of manoeuvre as more important. A large body of reserves was to go through an enlarged “bottleneck” and the continuation of manoeuvre was to be maintained through the automatic backing up of forward units. The war of 1914-1918 had shown to Liddell Hart that a penetration must be promptly widened before it is deepened. This arised when fresh troops were pushed through too quickly and they could soon be cut off. In his ideas of warfare, the tank was principally a means to adding mobility to the infantry, which still had the job of defeating the enemy resistance. Heavily influenced by Fuller’s ideas, he saw the use of tracked vehicles not only in a tactical purpose, but also as a tool for more flexible strategy, as they were tied neither to road nor to rail.<sup>168</sup> The idea of Jomini’s “inner” and “interior” line<sup>169</sup> of operations to Liddell Hart’s ideas is an axiom. Masses of tanks would be concentrated in some vulnerable part of the enemy. This tank concentration could operate along interior lines and therefore they could first strike at one part of the enemy force, then at the other.<sup>170</sup> The concept of a line of operation is based on Henry Lloyd’s ideas. It is mainly based on the existing own and enemy depots and the combination of different axis of movement via depots. It is “the line which unites these points, on which every army must act”.<sup>171</sup>

A comparison of Fuller and Liddell Hart’s New Model divisions offers some insights into their ideas of tanks, infantry organisational structures and chains of command, although these were “merely transitional arrangements”.<sup>172</sup> Itemized diagrams might give a distorted notion of people’s true thoughts about the art of war. As far as Fuller is concerned, there is not just subtle distinction, but a major transformative change during the early years of the 1920s (Fuller’s and Liddell Hart’s New Model divisions are presented in Appendix 2). It is important to notice that Fuller advocated twelve “infantry” battalions, each consisting of elements of infantry, tanks and machine-guns. His thought soon turned from the tactical composite organisations to more “all-tank” formations and became more intolerant towards cooperation between infantry. The chain of command followed a set pattern of traditional and inflexible organisations. Also the “heavy” divisional support organisation made the whole division

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<sup>167</sup> Macksey, pp. 26 - 27. The Germans quickly penetrated the British lines and recaptured much of the ground they had lost.

<sup>168</sup> Winton pp. 19 – 20.

<sup>169</sup> Design for operations – the British military doctrine (1989), p. 82. Operating on interior lines has less far to move to concentrate force at or supply any part of its front. Therefore, the army should be able to manoeuvre more quickly against the adversary.

<sup>170</sup> Shy, pp. 169 – 170.

<sup>171</sup> Lloyd (1792), pp. 36 – 37, 95.

<sup>172</sup> Winton, p. 21.

unsuited to any manoeuvre warfare ideas. Fuller's organisation was only a transformative phase to his more ripe ideas, though the ideas of replacing the cavalry regiments with sixteen Tank Battalions and the replacement of one infantry company with a tank company was itself quite an epoch-making measure.<sup>173</sup> Fuller's idea of a "New Model" Division designated specifically for a European war was frostily received, because the financial situation would not permit the Army to develop two different kinds of divisions.<sup>174</sup>

Liddell Hart based his organisation on his more "mature" ideas of future warfare. By the mid-1920s he had visioned his main thesis of the future battlefield and the demands required for reaching these goals. Therefore his proposition of the divisional organisation was more complete than Fuller's when it finally came out. His "all-arms" composite brigade was an attractive combination of both slow moving and faster medium tanks and armoured vehicle-mounted infantry. The effect of Liddell Hart's tactical ideas on his organisation is quite evident. Though the Composite Brigade is comparatively large, it seems to be relatively mobile and the tank cannons and artillery provided sufficient firepower. The Gas Dispensing Tank Battalion reflected Liddell Hart's ideas of the superiority of gas versus other measures of destruction. Liddell Hart's idea seemed to achieve an organisation of powerful fighting capability able to perform a wide variety of tasks independently. "Evolution will now become revolution. The tank is likely to swallow the infantryman, the field artilleryman, the engineer and the signaller, while mechanical cavalry will supersede (replace) the horseman."<sup>175</sup> His organisation, with a total of 300 tanks, hardly resembled the German armoured division in 1939, although Paul Dyster has discerned some similarities.<sup>176</sup> Perhaps Dyster actually referred to the idea of "composite brigade" as a basis of German trends of organisations, which indeed had some similarities with all-arms cooperation.

### 2.3 The Strategic Level Ideas

*"The aim of a nation in war is to subdue the enemy's will to resist, with the least possible human and economic loss to itself"*

B. H. Liddell Hart, 1927.

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<sup>173</sup> Macksey, p. 46.

<sup>174</sup> Bond (1980), p. 145.

<sup>175</sup> Liddell Hart: The development of the "New Model Army", AQ 9, October 1924, p. 44. Quoted in Winton, p. 21.

The battles planned by Colonel Thomas Edward Lawrence (Lawrence of Arabia)<sup>177</sup> in the Middle East front during WW I heavily influenced Liddell Hart's theories. In the Middle East the British Army found the Turks a more demanding opponent than had been expected. Lawrence created a legend of himself by formenting the Arab revolt, and riding brilliantly through the desert to attack Turkish supply routes. As Lawrence directed his attacks against Turkish materials, he had not sought the adversary's main strenght, but the most accessible material. He used "the smallest force in the quickest time at the farthest place" and was successful. Lawrence thought the armies of his own time to be "like plants, immobile as a whole, firm footed, nourished through long stems to the head". He emphasised the building of a force that would offer nothing material to the killing, as his adversary "might be helpless without a target". The imaginative success of his inventiveness with infinitesimal troops caused serious problems to the Turkish Army in the area.<sup>178</sup>

According to Liddell Hart's interwar ideas, the borderline and relation between strategy and tactics is shadowy. The purpose of strategy is to diminish the possibility of resistance by seeking to exploit the elements of movement and surprise. The perfection of strategy would produce a decision, which would destroy the enemy's armed forces without any fighting. If battles should occur, the task of tactics would be to manage the actual fighting. Thus, he found two different solutions in strategy. The first one is a strategy of elastic defence with calculated retirement, capped by a tactical offensive. The second is a strategy of offensive, aimed to upset the opponent, capped by a tactical defensive. Either compound forms the basis of an "indirect approach" or the psychological basis can be expressed with the word "lure". The indirect way would be the soundest strategy in any campaign as the idea would be to postpone battles until "the moral dislocation of the enemy renders the delivery of a decisive blow practicable".<sup>179</sup>

As a means of proving the way to reach final military goals, Liddell Hart carefully studied war history and found events confirming his ideas. He was intent on bedding his theories of indirect approach on historical foundation. Therefore, it would be quite useless to allege that his ideas were unprecedented. In my opinion, he was able to exploit historical ideas in his thoughts concerning contemporary problems of military movement and skills in warfare. The

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<sup>176</sup> Dyster, p. 157.

<sup>177</sup> Lawrence was born in Wales in 1885. After graduating from Oxford with a degree in modern history and undertaking archaeological work in the Middle East, he joined the army intelligence staff at Cairo at the outbreak of war. In 1916 he was sent on a mission to the Hejaz where the Arabs had started a revolt against the Turks. Lawrence administred British support for the Arab revolt and largely directed its strategy in the field.

<sup>178</sup> Liddell Hart (1935b), pp. 172 – 175, 218.

twenty-seven wars he studied embraced more than 240 campaigns. Liddell Hart observed that only six of these campaigns were settled by a direct approach to the main army of the enemy.<sup>180</sup> To Liddell Hart, General W. T. Sherman's victory was the result of moral, rather than physical failure.<sup>181</sup> In the process of his indirect approach, Liddell Hart found that a successful attempt to dislocate the enemy's psychological and physical balance was a vital prelude to decisive campaigns.<sup>182</sup>

Although there seem to be many similarities to Jomini's ideas of the lines of operation, Liddell Hart did not analyse Jomini's "territorial" and "manoeuvre" lines of operations.<sup>183</sup> Hence, he seemed to follow the "manoeuvre" lines of operations, because his organisation was mounted on tracks and the chosen line would not need any territorial bases to be able to manoeuvre. Still, though interested in the intellectual values of armed forces, he did not take into consideration the "Culminating Point"<sup>184</sup> of the offensive or defensive action, where running out of time, space and energy results in the culmination of the aimed attempts.<sup>185</sup> To be able to reach the indirect influence, the manoeuvres themselves have occasionally reached the economic influence during the past centuries and no physical contact against the source of supply or either the opposing state of army has been needed.<sup>186</sup>

The idea of creating chaos took priority, but to Liddell Hart chaos did not mean the same as destruction. Destruction of the enemy's factories and communications may reduce his post-war value as a potential customer, although the measures directed to subdue enemy's will to resist would naturally require strikes against this Achilles' heel of the enemy army.<sup>187</sup> Therefore during WW II Liddell Hart became a leading opponent of the Allied strategic

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<sup>179</sup> Liddell Hart (1929), pp. 144 - 146, 152 - 153.

<sup>180</sup> Liddell Hart (1929), p. 141.

<sup>181</sup> Swain (1990), p. 38.

<sup>182</sup> Liddell Hart (1929), p. 5.

<sup>183</sup> Shy, p. 166. "Territorial" was the "natural" kind of line; the rivers, mountains, oceans and deserts. Also fortifications, political boundaries, naval bases and road networks were included. "Manoeuvre" lines meant basically a strategic choice; within the range of choice allowed by the prewar environment, where to fight? what kind of force to use? These terms are easily mixed with references to "bases" and "zones" or even to "theatres" of operations.

<sup>184</sup> ATP-35 (B), p. XXVI. Culminating Point: An operation reaches its culminating point when the current situation can just be maintained but not developed to any greater advantage. It is the point in time and space when the attackers combat power no longer exceeds that of the defender, or when the defender no longer has the capability to defend successfully.

<sup>185</sup> Paret, Peter (1990b): Clausewitz. In *Makers of Modern Strategy. From Machiavelli to the Nuclear Age*. Edited by Peter Paret. Clarendon Press, Oxford 1990, p. 205.

<sup>186</sup> Liddell Hart (1929), p. 145.

<sup>187</sup> Liddell Hart (1925), pp. 41, 49, 79.

bombing of Germany.<sup>188</sup> He definitely was not a supporter of General Giulio Douhet and his theory of strategic bombing against enemy population since WW II. Douhet's famous book entitled "The Command of the Air" contained his theories of the use of strategic bombing against Austria across the Alps. Douhet believed that this type of attack could paralyse an enemy state both physically and mentally. In the 1920s there were advocates of Douhet's theories in Britain. Britain's own apostle, Air Marshal Sir Trenchard, almost eliminated the production of fighters for the trend of long-range bombers. He claimed that the moral effect of bombing stood undoubtedly to the *matériel* effect in a proportion of twenty to one.<sup>189</sup>

It is important to bring up the fact that Liddell Hart saw the use of gas as the only way of avoiding permanent injury to the enemy, although the idea of using gas became too unpopular the late 1920s. He still tried desperately to convince his readers of the suitability of using gas as the only instrument of victory.<sup>190</sup> Like many contemporary thinkers in the 1920s, Liddell Hart found the solution in the airplane, though it was not going to absorb land and sea functions.<sup>191</sup> The air introduced Liddell Hart to third dimension in warfare and it enabled the way "to jump over" the enemy army "at the seat of the opposing will and policy".<sup>192</sup> The only reasonable solution to influencing the enemy Achilles heel was the use of air forces using gas. The main objective was not the destruction of enemy's army, but the crushing of the enemy nation's economic well being and moral strength. Liddell Hart saw that airplanes and gas would eventually provide a perfect combination permitting the demoralisation of the enemy with a minimum of physical destruction and death.<sup>193</sup> In fact, the possibility of a gas attack in the next war was taken seriously. In the FSR (1935) the preparations in peacetime include gas precautions for the civilian population.<sup>194</sup> For Fuller, the possible use of gas set high standards for the gas-proof tanks. Certainly adequate gas-proof vehicles were required to secure the ability of "swift penetration" and high tempo while manoeuvring inside the hostile army's

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<sup>188</sup> Bond (1977), p. 43.

<sup>189</sup> Messenger, p. 34 – 35; Friedman, Norman: Desert Victory. The War for Kuwait. The Naval Institute Press, Annapolis, Maryland 1991, p. 130.

<sup>190</sup> Liddell Hart (1927), pp. 82 - 83. He tried to prove that the percentage of tuberculosis cases among men who had been gassed was 2.45 per 1000. The subject was titled: "The Humanity of Gas". The annual rate of tuberculosis among enlisted men serving in France in 1918 was 3.50, and in 1919 4.30 per 1000. Of course this statistical value is not in the explanation given by Liddell Hart.

<sup>191</sup> A Letter from J. M Scammell to Liddell Hart 23 October 1923. Quoted in Bond. p. 40.

<sup>192</sup> Liddell Hart (1925), pp. 43, 48.

<sup>193</sup> Liddell Hart (1925), p. 51; see also: Swain (1990), pp. 40 - 41; O'Neill (1988), p. 6.

<sup>194</sup> Field Service Regulations (1935), p. 4.

territory in the areas surrounded by gas. As a one application of Fullers “Plan 1919”, he considered that the usage of gas could contribute substantially to the strategic results.<sup>195</sup>

According to Liddell Hart, the function of grand strategy was to discover and exploit the Achilles heel of the enemy nation by striking not against its strongest bulwark but against its most vulnerable spot.<sup>196</sup> These targets or areas of vulnerability were industrial heartlands, communications and centres of government or population.<sup>197</sup> Scipio Africanus directed his attention to Hannibal’s moral Achilles heel in Spain, since it was his base of reinforcements and lifeline to areas around Italy.<sup>198</sup> Napoleon tried to force Spain under his will. It is a well-known fact, that his acts of coercion did not make any crucial importance. According to Liddell Hart the goals of war were<sup>199</sup>

- 1 The prosperous continuance of national policy,
- 2 To subdue the enemy’s will to resist with the least possible economic, human and ethical loss, and
- 3 More perfect peace.

It is characteristic of Liddell Hart to reproach Clausewitz for the result of WW I and also later the result of WW II. He interpreted Clausewitz to be the evil genius whose false strategic doctrine was responsible for futile battles of attrition such as Verdun, Somme and Passchendaele. In Clausewitz’s thesis, “war is an act of violence pursued to the utmost”; no place of moderation is included. Particularly Clausewitz’s fallacy of the logic of war provoked Liddell Hart.<sup>200</sup> Three dominant theories of Clausewitz perverted the nineteenth and the early twentieth century military thinking,<sup>201</sup>

- 1 The absolute warfare: the corollary of which was “the nation in arms”.
- 2 The concentration against the main enemy, who must be overthrown first.
- 3 Armed force forms the true objective and battle the true means to it.

Liddell Hart criticized Clausewitz for placing “will” last, not first, in his lists and having a too direct approach in his theories.<sup>202</sup> This faulty directness gave Jomini reason to reproach

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<sup>195</sup> Fuller (1943), p. 31.

<sup>196</sup> Liddell Hart (1925), p. 27.

<sup>197</sup> Swain (1990), p. 40.

<sup>198</sup> Liddell Hart (1930), p. 27.

<sup>199</sup> Liddell Hart (1925), p. 91.

<sup>200</sup> Liddell Hart (1972), p.76.

<sup>201</sup> Liddell Hart (1935a), p. 21; See also, Liddell Hart (1927), pp. 94 - 95.

<sup>202</sup> Liddell Hart (1927), p. 93.

Clausewitz for neglecting the importance of manoeuvre in achieving a complete victory, although Jomini admitted that it is very important to know how to manoeuvre skillfully and suitably.<sup>203</sup> Clausewitz was a product of his own age and many of his ideas were borrowed from the philosophy of German Idealism and from the scientific thought of the time. Although Clausewitz is to be considered principally as personifications of Liddell Hart's disdain for the result of WW I, Clausewitz's theses were to be considered as a guide to the conduct of war, instead of only being a treatise on the nature of war.<sup>204</sup>

#### 2.4 The Psychological Factors inside the Tactical and Strategic Level Considerations

“Originality is the one thing that unoriginal minds cannot see the use of.”

John Stuart Mill

I would argue that the ideas of using different instruments in achieving the collapse of the adversary's moral form the abstract and simultaneous unconcrete field of theoretical implications. These themes seem to be included in the majority of military writings. The comprehensive pondering of the subject is given more attention in the following chapters, because the theme is prominent in the theories under closer and comprehensive examination. It seemed to be popularly understood among the British officers during the 1920s that the invention of armoured vehicles was to help gain surprise more easily, and the effect of the shock they could create was more likely than earlier in the century. Liddell Hart expressed the value of armoured vehicles slightly differently. In lieu of mere physical impulse, he adopted Charles Argant du Picq's<sup>205</sup>, Jacques Guibert's and Jean Colin's opinions of the priority of moral impulse against an adversary. Picq and Guibert underrated any mathematically based solution to subdue enemy resistance, because the morale of the army was definitely dependent on other than quantitative elements. Colin wrote that “the moral forces act most powerfully and have their preponderant effect”.<sup>206</sup> Even Napoleon had been intrigued by the moral

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<sup>203</sup> Antoine Jomini (from Summary of the Art of the War) in the Sword and Pen, p.145.

<sup>204</sup> Bond (1977), p.33, 81.

<sup>205</sup> C. A. du Picq was born in 1821 and was commissioned in the French Army in 1844. He served in the Crimean War. As a Colonel he was killed in 1870 in the Franco-German War. His battle studies were published after his death.

<sup>206</sup> Charles A. du Picq (from Battle Studies) in the Sword and the Pen, p. 171; Jean Colin (from Transformation of War) in the Sword and the Pen, p. 206.

component, which is why he was said to have taken de Guibert's book *Essai Général de Tactique* into the field with him.<sup>207</sup>

Fuller counted on physical strength and saw causality in the superior physical impulse to the faded enemy resistance. The Battle of Cambrai had demonstrated to Fuller that the only way to win an armoured battle was to concentrate superior troops in order to cause more than just local disorganisation.<sup>208</sup> Fuller saw a relationship between gaining surprise and winning a rapid and decisive victory.<sup>209</sup> He estimated that "in war a general should aim at a decisive point, if this spot is also a soft spot so much the better, but if it is only a soft spot he is not a great general". The indirect approach was therefore not a "cure-all".<sup>210</sup> According to Fuller, the most powerful effect was to be performed by moral influence. "The first method may be compared to a succession of slight wounds which will eventually cause him to bleed to death; the second – a shot through the brain." The brains of an army is its Staff Headquarters. The collapse of the personnel they control would be a mere matter of hours. The other shot could be directed to the stomach, that is, to dislocate their men and starve them to death or scatter them away. To penetrate the adversary's command system required either the use of airplanes or tanks, a kind of airborne operation. This option would be disadvantageous to the attacker, because his forces would be too weakly equipped compared to the adversaries. Unfortunately, the second alternative never came to be relevant, because the Medium D-tank was not ready to fulfil these demands.<sup>211</sup>

As mentioned earlier, in Fuller's ideas the armored forces advanced deep in to the enemy's rear in order to achieve greater psychological dislocation and to paralyse the enemy's command. After dislocating the enemy, it would be much easier to engage and defeat the enemy in a decisive battle.<sup>212</sup> The supremacy of shock effect of tanks over the other measures is quite conspicuous. Even Henry Lloyd had warned not to rely on the shock effect of cavalry. His thoughts were evidently based on the eighteenth century battlefields, which were mainly

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<sup>207</sup> Simpkin (1986), p. xvii; Palmer, p. 95. Guiber was a conscious disciple of Frederic, but he forecast more clearly than Frederic some of the transformations that were just coming. His value was accentuated to his contemporaries through his ideas of reforms. *Essai Général de Tactique* was pervaded into two themes. One demanded a patriot or citizen army. The other was more concerned about the movement of the armies.

<sup>208</sup> J. F. C. Fuller (from *Memoirs of an Unconventional Soldier*) in *The Sword and the Pen*, p. 232.

<sup>209</sup> Reid (1991), p. 29.

<sup>210</sup> Reid (1994), *Between the Wars*.

<sup>211</sup> J. F. C. Fuller (from *Memoirs of an Unconventional Soldier*, 1936) in *The Sword and the Pen*, p. 228 – 232; Winton, pp. 15 – 16. Fuller requested a tank designed with a speed of 20 miles per hour, with a radius of action of 200 miles.

<sup>212</sup> Reid (1990), p. 70.



huge tactical level “skirmishes”.<sup>213</sup> In addition, Liddell Hart valued highly the psychological spheres, because they enabled the element of surprise to be brought up. Naturally, it would vary in each case of the manifold conditions, which virtually were likely to affect the will of the opponent.<sup>214</sup> Consequently, it is not surprising that the essence of manoeuvre warfare is nowadays to defeat the enemy’s will.<sup>215</sup> Liddell Hart esteemed that one or several of the following ways would produce the psychological dislocation simultaneously.<sup>216</sup>

- 1 By upsetting the enemy’s dispositions by sudden “change of front and by dislocating the distribution of his forces.
- 2 By separating his forces.
- 3 By endangering his supplies.
- 4 By menacing the routes by which he could retreat in case of need and re-establish himself in his base of homeland.

Brigadier J. P. Kiszely claimed that surprise through deception has provided much scope for originality. Theorists interested in manoeuvre warfare generally stress the link between originality and initiative. The reason for Napoleon’s long run of victories lay on his opponents’ inability to understand his way of fighting and on devising in effective responses.<sup>217</sup> The method of attempting the unexpected is also one of Frederick the Great’s particulars for offensive warfare, one of the clearest ways to achieve success. He also emphasised the very opening of the campaign, which should be an enigma for the enemy.<sup>218</sup> The invincible tactics presented by Napoleon during the late eighteenth and early nineteenth century was mainly based on his highly innovative tactics, because his adversaries had serious difficulties in understanding his way of fighting and devising effective responses.<sup>219</sup> Napoleon relied on training, organizational changes and doctrinal innovations. This development was, therefore, not the outcome of technological innovations.<sup>220</sup>

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<sup>213</sup> Lloyd (1766), perface.

<sup>214</sup> Liddell Hart (1929), p. 152.

<sup>215</sup> More about the psychological foundations of manoeuvre warfare from David A Grossman: *Defeating the Enemy’s Will: The Psychological Foundations of Manoeuver Warfare*. In *Manoeuver warfare an Anthology*. Editor: Richard D Hooker, Jr. Novato 1993. pp. 142 - 190.

<sup>216</sup> Liddell Hart (1929), p. 154.

<sup>217</sup> Kiszely (1993), pp. 25 – 27.

<sup>218</sup> Frederick the Great (from *Military Instructions*) in *The Sword and the Pen*, p. 96 - 97. The period of 1740 to 1815 opened with the accession of Frederic the Great as King of Prussia and closed finally with the dethronement of Napoleon. The period saw the perfection of the older style of warfare and the launching of a newer style.

<sup>219</sup> Kiszley (1993), p. 27; See also: Paret (1990a), pp. 124 – 127.

### 3 THE PROCESS OF BRITISH ARMY MODERNISATION AND ITS FOREIGN “COMPETITORS” UNTIL THE SECOND WORLD WAR

“The reform of military doctrine in peacetime is never an easy task.”

Michael Howard, 1974.

In the 1920's Britain saw no obvious enemy in the near future. The threat of the Soviet Union against India was considered the most dangerous one and the BEF should therefore be a mixed force of about one division with some cavalry and some tanks. Hence, the defence preparations were guided by the assumption that the country would not be involved in a major war for at least ten years (the Ten-Year Rule).<sup>221</sup> Britain still had to maintain two occupation armies: one at Constantinople until 1922 and the other in the Rhineland until 1930. In Ireland, the British garrison was increased to the colossal total of 80 000 in July 1921.<sup>222</sup> The lack of resources was the main problem in the British Army in the interwar period. The Army was also constantly short of the required manpower, as recruits were simply not forthcoming. The atmosphere of pacifism and the trust in the League of Nations in maintaining the peace could be seen behind the reluctance of young men to enlist.<sup>223</sup> The lack of clear commitment to send ground forces to the Continent in the event of a future war was definitely one major factor in the deficient concept of armoured warfare.<sup>224</sup> The principal functions of the Ground and Air Forces were to provide for garrisons in India and in Egypt under British control.<sup>225</sup>

The British interest in the European continent was revived in 1925 as a consequence of the Locarno Treaty, which made the Rhine the true strategic frontier of Great Britain. Still no considerable action for the preparations of an Expeditionary Force capable of intervening in a Continental war took place, although it was discovered that the British Expeditionary Force (BEF) for extra-European commitments was much smaller and less prepared than its pre-1914 equivalent.<sup>226</sup> Liddell Hart considered that one reason for the slowness of the whole process of

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<sup>220</sup> Crevel, p. 167; See also: Paret (1990a), p. 137. Paret estimated that the Napoleon's large armies had used the technological capacity of the early nineteenth century to its final limits.

<sup>221</sup> Bond (1977), pp. 37, 206.

<sup>222</sup> Bond (1980), pp. 16 - 17. The Constantinople occupation army consisted of 17 000 troops and Rhineland occupation of 45 000 men till 1919 and thereafter the permanent garrison was reduced to a token force of eight infantry battalions and one cavalry regiment.

<sup>223</sup> Brereton, J. M.: *The British Soldier. A Social History from 1661 to the present day.* Bristol 1986, p. 156. As late as 1937 the strength was reported to be 980 officers and 20 000 soldiers short of establishment.

<sup>224</sup> Winton, p. 1.

<sup>225</sup> Bond (1980), p. 25.

<sup>226</sup> Bond (1980), pp. 77 - 80. The Locarno Treaty was signed on 16 October 1925. The contracting parties Belgium, France, Germany, Great Britain and Italy guaranteed the frontiers between Germany and France; Bond - Alexander, p. 605.

organisational change was the troops serving in India, which remained unresponsive to the progress of the Home Army.<sup>227</sup>

WW I had bequeathed little to the Indian Army in the way of new ideas in tactics or in equipment. Tanks or even lorries were ignored among the senior officers serving in India. The survival of 26 horse cavalry regiments in India in as late as 1936 proves that outdated military thoughts were still powerful.<sup>228</sup> The Cardwell system, in which men were trained for a skill particular to a mechanized unit at home, was not useful overseas. The methods and drills used at home could not be used similarly abroad. There were other technical problems as well. Personnel serving in India found it difficult to stay abreast with organisational developments at home.<sup>229</sup> Liddell Hart was in favour of abandoning the whole system of Cardwell, because of its unsuitability in transforming the ideas of mechanised warfare.<sup>230</sup> The progress of mechanisation was largely due to environmental facts, which evidently favoured the mechanisation process in Egypt, even though the development was tangling similarly there. The process of mechanisation should therefore proceed simultaneously through the whole Empire. Forming two completely different army divisions, one for the Continent and another for the rest of the Empire, was seen as a waste of resources.<sup>231</sup>

The Chiefs of Staff were extremely confused about the BEF's role on the Continent in the mid-1930s. They were still of the opinion that the BEF was necessary to maintain the balance of power on the Continent, though for political reasons the Army was unable to make any significant rearmament plans. Only the use of the Royal Air Force (RAF) as a deterrent<sup>232</sup> force was introduced. For reasons best known to the RAF itself, no tactical or strategic studies on how to use the bombers existed. According to Marshal of the Air Force Sir John Slessor, the belief in the bomber was based on intuition, a matter of faith.<sup>233</sup> According to FSR (1935), the role of the Army was to seize and hold bases from which the air force would operate to attack enemy forces or communications and that the role of Mobile Division was to pursue with the assistance of other mechanical formations.<sup>234</sup> In fact, Liddell Hart, as mentioned in the previous chapter, argued that the Royal Air Force should take the Army's place in

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<sup>227</sup> Liddell Hart (1927), p. 31.

<sup>228</sup> Bond (1980), pp. 105 - 107.

<sup>229</sup> Winton, p. 230.

<sup>230</sup> Liddell Hart (1927), p. 14.

<sup>231</sup> Bond (1980), p. 113.

<sup>232</sup> Deterrence means persuading an opponent not to initiate a specific action because the perceived benefits do not justify the estimated costs and risks.

<sup>233</sup> Howard (1974a), p. 113.

providing a Continental commitment. He saw no possibility for Britain to afford to equip all three services simultaneously with the same priorities in expenditure. The Air Force and the Navy would give better value for money.<sup>235</sup> In any case, the tremendous advantage of the defensive had blinded the need for sufficient troops as it was stated that the attacker needed a preponderance of three to one in order to have any success.<sup>236</sup>

In 1939, the British Army was still in its old pattern, but then again, there seemed to be no rational reason to change the proven predominant patterns. Actually, there was little radical change in the British Army until long after WW I. Even the soldiers' uniform, training and weapons were much the same as those of the force that went to France in 1914.<sup>237</sup> The arrival of 200 000 conscripts for six months' training created inexpressible chaos in the summer of 1939. This act sealed finally Liddell Hart's hopes of creating a small, high-quality mechanical force. The tendency seemed bent on an underequipped conscript army suited only for a static attritional war like that of 1914-1918.<sup>238</sup> Only two so-called mobile divisions were ready for action, one in England, the other in Egypt, both of them poorly equipped in numbers and the quality of tanks, with no self-propelled artillery and very little else in the way of supporting arms and services.<sup>239</sup> The huge size of the whole Empire versus the financial resources available was in itself an open question still after WW II. Apart from the fact that the political situations in Europe came closer to a potential crisis, the training of the army still lacked purpose.<sup>240</sup>

### 3.1 The Triumph of Mobile Firepower During the 1920s

“The secret of success in the Army is to be sufficiently insubordinate, and the key word is sufficiently.”

Colonel Percy Hobart

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<sup>234</sup> Field Service Regulations (1935), pp. 3, 47.

<sup>235</sup> Bond (1977), p. 94; Bond (1980), p. 135. One of the Army's greatest difficulties in the process of mechanisation was the dispassionate commitment to financial retrenchment. The Army Estimates decreased from just under £94 million in 1921 to £42.5 million by 1926 and went on falling steadily year by year until 1932

<sup>236</sup> Lester, J.R.: Tank Warfare. London 1943, p. 94.

<sup>237</sup> Brereton, p. 111.

<sup>238</sup> Bond Brian: The Army Between the Two World Wars 1918 - 1939. In “The Oxford History of the British Army”. Oxford University Press 1996, p. 267.

<sup>239</sup> Carver, p. 54.

<sup>240</sup> D'Este, Carlo: The Army and the Challenge of War 1939 - 1945. In The Oxford History of the British Army. Oxford University Press 1996, pp. 272–297, p. 272.

The Royal Tank Corps (RTC)<sup>241</sup> was eventually formed no earlier than in late 1923 - after a considerable delay.<sup>242</sup> There were no fundamental changes to the ideas of 1917, when the need for a fast, light tank and a slow, heavily armoured tank was announced.<sup>243</sup> The Tank Training manual from the year 1930 still considered that the “tank classification to their tactical characteristics will be actual only after the modified types of tanks are produced”.<sup>244</sup> The changes were still to come. In 1925, the British Army carried out its first large-scale peace time manouvres since 1914. The experiences of the new concepts of mechanised warfare were disappointing. The problem was the lack of an official doctrine for organisations above company level. All the canons of manoeuvre learned from WW I “went by the board” and the troops finally ended up in a stalemate.<sup>245</sup> The exercise demonstrated tank versatility and endurance. Unfortunately, the tanks were mishandled tactically and therefore most of the officers lost their faith in them.<sup>246</sup> The main technical problem during the entire 1920s was related to the lack of radios (wireless sets). This made the movement of any tank formations bigger than a battalion almost impossible to control. As late as 1924 the whole project of getting radios for the Army was abused in the House of Commons as a profligate “waste of public money.”<sup>247</sup>

It is interesting that Fuller did not take the opportunity to command the force even though it was offered to him. Command was given to an orthodox infantryman Colonel R. J. Collins. Fuller lost the chance to put his theories into practice.<sup>248</sup> There may be truth in Kenneth Macksey’s claim that Fuller would rather have remained in the War Office than commanded a formation. He certainly was lacking in the art of command, having been without experience for almost 20 years.<sup>249</sup> Unfortunately, Colonel Collins was less concerned with advanced

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<sup>241</sup> According to the Tank and Armoured Car Training manual (1927, p. 10) units of the RTC were tank battalions, armoured car companies and salvage companies, with salvage tanks, towing tanks and workshop lorries (which were to be an integral part of the tank corps repair organisation in war time).

<sup>242</sup> Bond (1980), pp. 132 - 133; Fletcher, David: *Mechanised Force. British Tanks between the Wars*. London 1991, p. 61. One experimental brigade had been recommended as early as 1921. It experimented without the various theories of a new age of tank warfare.

<sup>243</sup> Macksey, p. 24.

<sup>244</sup> Tank Training (1930), p. 1.

<sup>245</sup> Bond (1980), p. 138.

<sup>246</sup> Macksey, p. 68.

<sup>247</sup> Bond (1980), p. 136.

<sup>248</sup> Bond (1980), p. 140.

<sup>249</sup> Macksey, p. 71; Drewry (1993), p. 21. Drewry found more prestigious reason to refusing this command post. He did not see Fuller eagerly committing himself into the chores of garrison administration; Winton, p. 79. Harold Winton suspects that Mrs. Sonia Fuller was not eager to take on the responsibilities of a commander’s wife. Anyway, Winton also had doubts about the personal features of Fuller and it is quite possible that Fuller liked to work independently.

operational tests than with the movement of tank formations. Any impact made by the armoured forces against the enemy was neglected. This course also led to neglecting wider strategic manoeuvres designed to throw the enemy off balance,<sup>250</sup> which was one of the most important maxims of Liddell Hart.

The later exercises of the Armoured Forces in 1928 were seriously inhibited by lack of suitable tanks and vehicles.<sup>251</sup> Finally, it was broken up during the same year.<sup>252</sup> These and earlier exercises were small-scale and proved nothing unexpected, but they still demonstrated the superiority of mechanised units over traditional infantry and cavalry units.<sup>253</sup> Even more alarming features came into sight during the 1928 manoeuvre exercises, when the tank battalions were submitted to opposing sides. It was considered an official move to prevent the superiority of the Armoured Force. This act was to “safeguard the morale and the training of the cavalry and infantry”.<sup>254</sup> To Liddell Hart these exercises revealed that his “Man-in-the-Dark” theory at a tactical level had become true. The opposing infantry division was now between the tank and the aircraft, although the use of the mechanised force was too concerned with “pounding and punching”. Their method was nothing more than a typical infantry-brigade attack with more speed in it.<sup>255</sup> He showed his anxiety concerning of the use of armoured “fist” earlier in his writing in the RUSI Journal. In conclusion he stated: “the problem today is not merely what tanks can do, but what mental and moral effect they can have... talk about gradual mechanisation is merely a soothing draught, which though innocuous in itself, is indirectly perilous to a grave cause.”<sup>256</sup>

It was not just a time for conservativeness to lift its head, as it was also admitted in the 1927 tank manual that the duty of tanks was to assist other arms and at times to act independently of them.<sup>257</sup> In the manoeuvre exercises, the cooperation between tanks and cavalry caused the most intractable problems. Cavalry still held its former position until 1937 when its status was forced to be reconsidered,<sup>258</sup> even though the Cavalry Brigades were seen as unsuitable for

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<sup>250</sup> Bond (1980), p. 142.

<sup>251</sup> Bond (1980), p. 145.

<sup>252</sup> Liddell Hart (1935a), p. 174.

<sup>253</sup> Bond - Alexander, p. 605.

<sup>254</sup> Bond (1980), pp. 146 - 147.

<sup>255</sup> Liddell Hart (1935a), p. 160.

<sup>256</sup> Liddell Hart (1931). RUSI Journal, May 1931. Quoted in Messenger, p. 76.

<sup>257</sup> Tank and Armoured Car Training (1927), p. 21.

<sup>258</sup> Bond (1980), p. 144.

their planned task.<sup>259</sup> These conclusions cannot be found from the official manuals, where the cooperation is pointedly brought forth.<sup>260</sup> The tactical use of armoured troops was determined on the basis of WW I experience. According to Field Marshal Archibald A. Montgomery-Messingberd, the basic function for British tank forces would be supporting the infantry and the cavalry, just like in WW I.<sup>261</sup> Therefore; the mechanised parts of the division were sitting tight and occasionally doing minor attacks that could be easily evaded by the opponent.<sup>262</sup>

Liddell Hart considered the evolution of tankettes to be more important than that of the medium tanks, because they were comparatively large as a target,<sup>263</sup> even if the idea of deep penetration of armoured troops remained in his thoughts. In a thought-provoking thesis, he insisted on the crucial importance of the acts of “Great Captains”, who were ready to undertake the most hazardous indirect approaches - over mountains, deserts or swamps if necessary, with only a fraction of force, even cutting themselves loose from their communications.<sup>264</sup> The tankette was not only a cheap light tank useful only for training purposes, as expressed by Paul Dyster.<sup>265</sup> It was a serious attempt to add the element of infantry to the tactics of tanks. Charles Broad had emphasised that tanks were best employed independently to exploit their shock action in attack. Though generally favourable to Broad’s views, Liddell Hart felt that the whole idea of breakthrough into the enemy rear neglected the shock effect that using tanks at night provided. He also regretted Broad’s neglect of “tank marines”. Broad envisaged the Army of the future having cavalry divisions, light armoured formations for infantry close-support and medium armoured formations as spearheads, with the main role of independent attack to break through the enemy front lines toward the rear, creating chaos. His plan was reminiscent of Fuller’s “Plan 1919”.<sup>266</sup>

Liddell Hart submitted two memoranda outlining plans for the reorganisation of the Army at home and in India. The keynote was that mechanisation would reduce the need of infantry and cavalry. The plan to expand the RTC to three brigades came to nothing in 1929, because there was intense opposition to the necessary disbandment of four infantry battalions in the War Office. Any reforms like this were not to come, because George F. Milne as Chief of the

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<sup>259</sup> Macksey, p. 129.

<sup>260</sup> Tank and Armoured Car Training (1927), p. 23.

<sup>261</sup> Bond (1980), p. 147.

<sup>262</sup> Liddell Hart (1935a), p. 169.

<sup>263</sup> Liddell Hart (1935a), p. 115; See also: Liddell Hart (1927), pp. 17 – 23, 63.

<sup>264</sup> Liddell Hart (1929), p. 143.

<sup>265</sup> Dyster, p. 165.

<sup>266</sup> Bond (1980), pp. 152 - 153.

Imperial General Staff (IGS) made infantry reorganisation a top priority. The aim was to guarantee the proper organisation of the four basic formations - the Cavalry Brigade, the Light Armoured Brigade, the Medium Armoured Brigade and the Infantry Brigade. Any plans to produce armoured divisions or organisations above tactical level were delayed to a distant date.<sup>267</sup> Anyway, Major General Heinz Guderian<sup>268</sup> described the armored brigade as a “completely modern tactical formation”.<sup>269</sup>

According to Liddell Hart, Britain was the pioneer and leading country in mechanisation until the early 1930s. Especially Charles Broad’s official manual (1929) of mechanised warfare had affirmed Liddell Hart of the leading position of the British theorists.<sup>270</sup> Broad’s booklet was called “Mechanised and Armoured Formations”, better known as “The Purple Primer”. It had considerable influence on the use of British armoured forces during the 1930s because it contained rules of all arms cooperation. The book presented the main principles that guided the organisations of the following years. Broad proposed a fully mechanised and armoured force organised into two groups, a reconnaissance group of armoured cars and tankettes<sup>271</sup> and a striking group of medium tanks and self-propelled and lightly armoured howitzers to deliver counter-battery fire and smoke.<sup>272</sup> Broad distinguished between three types of offensive operations for armoured forces, which gave the direction to the tactical thoughts throughout the 1930’s.<sup>273</sup>

- 1 Independent attack by one or more armoured brigades lasting up to 48 hours.
- 2 Attack in mobile operations by armoured brigades in cooperation with either cavalry of infantry brigades.
- 3 Attack on an elaborately entrenched and prepared position.

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<sup>267</sup> Bond (1980), pp. 148 - 150.

<sup>268</sup> Guderian was a pioneer in the development of the German armoured forces. He later proved to be a dynamic and effective field commander. He played a crucial role in the Polish campaign, in the operation against France in May-June 1940 and finally in the attack on the Soviet Union in 1941. He was removed from field command in December 1941 after disputes with his superiors. He became an Inspector of Armoured Troops in March 1943 and later a Chief of the General Staff. Unfortunately, his career came to a halt after serious disagreements with Hitler in March 1945. English edition of his more famous memoirs, entitled *Panzer leader*, was published in 1952.

<sup>269</sup> Guderian, p. 141.

<sup>270</sup> Liddell Hart, B. H.: *Defence of the West. Some Riddles of War and Peace*. Cassell and Company Ltd, London 1950, p. 67.

<sup>271</sup> The Tankette was thought useful (only) for intercommunication in battle and drawing fire in anti-tank defence and creating chaos in the defence.

<sup>272</sup> Carver, p. 49.

<sup>273</sup> Carver, p. 50; Lester, p. 41.



It was defined that “to obtain the maximum value from the employment of tanks in offensive operations, they should be used as a concentrated force in depth”. This meant that effective cooperation could not be obtained with less than one tank battalion to a division.<sup>274</sup> It also had prevented the work of developing the armoured division as a unit. Liddell Hart criticised the “Purple Primer” for its lack of ambitious objectives. Still, it contained much of both Fuller’s and Liddell Hart’s theses. One of the most important aims was the objective of morale.<sup>275</sup> It is clear that the British were concentrating their energies on producing superior tank brigade or battalion size organisations. Any larger Army and corps-sized command post exercises were neglected, just like before WW I. I much agree with W. G. F. Jackson’s views on the importance and prominent position of War Office directors in the process of the adaptation of the tank philosophy, even though there has been a lot of criticism against their deep-seated prejudice against the process of modernisation.<sup>276</sup>

The culmination of this armoured experimental phase was the exercise of the 1st Brigade Royal Tank Regiment in 1931. It was, as Fuller would have put it, “all tank”, i. e. entirely composed of different tracked vehicles. Brigadier C. Broad formed a drill that enabled the whole brigade of some 190 tracked vehicles to manoeuvre as a one unit. Broad’s force consisted of three battalions RTC and one light battalion.<sup>277</sup> The means of enabling the regiment’s concentrated movement was the wireless communication system. Liddell Hart was later to assert that an armoured brigade “was the only formation that can, in the strict sense, be controlled and manoeuvred on the battlefield”. At the same time, he took a critical stance towards the experiments obtained on the “skeleton” size units, which were too movable during the peacetime manoeuvres. They made the movement of a full strength division too stagnant, because “much of the superfluous fat (*in organisation*, author’s note) is undoubtedly caused by the military tendency to provide for every contingency”. This superfluous fat consisted of “endless tail of horse transport and other vehicles”. In any case, the experiments of army manoeuvres were encouraging and showed to Liddell Hart the British capability of launching the famous “Sherman march”, referred to earlier in this study.<sup>278</sup>

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<sup>274</sup> Tank and Armoured Car Training (1927), p. 22.

<sup>275</sup> Messenger, p. 50.

<sup>276</sup> Jackson, p. 29. These three classes were the light tanks for reconnaissance, fast cruiser (medium) tanks for armoured divisions and heavily armoured infantry (medium) tanks.

<sup>277</sup> Bond (1980), p. 157.

<sup>278</sup> Liddell Hart (1932), po. 5, 11.

### 3.2 The Prospering Tactical Ideas and the Mechanisation Process During the 1930s

“I shall miss the independence of this Command and the variety of responsibilities and interests outside the mere soldering.”

A letter from General Burnett-Stuart to Liddell Hart from Egypt (1934).

Traditional military conservatism, especially the interests of traditional arms, and the extraordinary financial crisis in 1931 put a severe limit on further innovation and experiment. The year 1931 probably marked the nadir of the Army's fortunes in the interwar period.<sup>279</sup> In 1933 there were only four established tank battalions (RTC) compared to 136 infantry battalions; and only two out of twenty cavalry regiments had been converted from horses to armoured cars. Liddell Hart saw no rational answer to this statistical distortion five years earlier, because this kind of army gave neither offensive nor defensive value in return.<sup>280</sup> He was frustrated in the low pace of the present transformation process. In addition, he criticised the outdated equipment, like the horse-ambulance, which constituted Liddell Hart's first childhood recollection of the Boer War.<sup>281</sup>

The British Army's commitment in India, Egypt and Iraq can be easily understood as a waste of tiny resources. Still, a great deal of benefits can be found from those commitments. The most effective value can be found from the experimental work with armoured vehicles. In Iraq some valuable experience in cooperation with the RAF was achieved by Lindsey's armoured units in 1921.<sup>282</sup> It is no exaggeration to claim that these areas were testing grounds for new ideas of using the armoured forces as well as an experimenting ground for the most revolutionary visions that might not be carried out in Britain. The deserts of Egypt gave an ideal opportunity full scope to utilize the tactical inspiration in an ideal laboratory for tank warfare, without the restrictions and the bleak conditions of the home army.<sup>283</sup> Hobart, the last tank pioneer still serving, was appointed to the command of the second “Mobile Division” in Egypt at the latter part of 1938. He faced intolerant attitudes toward his profession from the

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<sup>279</sup> Bond (1980), p. 155.

<sup>280</sup> Bond - Alexander, p. 606; Bond (1980), p. 159. Liddell Hart (1927), p. 12. There were 2176 infantry platoons to only 136 machine-gun platoons.

<sup>281</sup> Liddell Hart (1932), p. 6.

<sup>282</sup> Macksey, p. 61. Tank and Armoured Car Training, War (1927), p. 125. The manual includes statistics from the marches carried out in Iraq during 1921 - 1922; Bond (1980), pp. 182, 391; see also: Bond (1996), p. 257.

<sup>283</sup> Winton, pp. 3, 142.

beginning of his assignment from the Headquarters in Cairo. Still, he managed to plant the idea of mechanised warfare in his subordinates' minds. His spirit lived on in an organisation that was to be called the 7th Armoured Division, the famous Desert Rats during WW II.<sup>284</sup>

Some of Fuller's ideas can be seen in FSR (1935), as the strikes of the mechanized forces would be directed at enemy reserves, gun positions, headquarters, lines of communication and other valuable points in the rear areas. Even more interesting is the value of deterrents. According to FSR (1935), the mere threat of manoeuvre against the enemy line of communication could gain a victory.<sup>285</sup> Both the production of new types of tanks and the development of armoured formations caused problems. Because of a lack of resources, only few experimental models of tanks were presented.<sup>286</sup> These problems can be discerned in Broad's book *Modern Formations*, which was built upon the restrictive military and economic policies of the day. The book was carefully studied in Germany, because it presented the mistakes made in the early 1930s clearly by concentrating the main efforts in producing cheap tankettes instead of "real" light tanks. Broad also saw the importance of a far more efficient system of radio control for tank formations.<sup>287</sup> Another significant author's note treated the different types of army divisions. He classified them as cavalry divisions, divisions of tank brigades, motorised infantry with perhaps cavalry and independent formations consisting only of tanks and armoured cars.<sup>288</sup>

The interwar period was characterised by a lack of close cooperation between the RAF and the Army despite some bold experiments in the area of close support.<sup>289</sup> Brian Bond still finds it necessary to blaim both two services for the lack of an agreed tactical doctrine for air-ground cooperation.<sup>290</sup> The RAF's independent bombing doctrine, the official air policy, was the main cause for the reluctance of giving tank-supporting missions to squadrons.<sup>291</sup> Even the FSR (1935) stresses that the mobile forces "should have some aircraft working directly under the control of the armoured forces commander".<sup>292</sup> The Air Staff doubted that the experiences learned from the Spanish Civil War were a valid lesson for Britain. Very few soldiers - not

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<sup>284</sup> Messenger, p. 125.

<sup>285</sup> Field Service Regulations (1935), pp. 21, 46.

<sup>286</sup> Bond (1980), p. 161.

<sup>287</sup> Macksey, pp. 83 - 84.

<sup>288</sup> Messenger, p. 76.

<sup>289</sup> Bond (1980), pp. 144 - 145.

<sup>290</sup> Bond (1996), p. 270.

<sup>291</sup> Bond (1980), pp. 144 - 145.

<sup>292</sup> Field Service Regulations (1935), p. 48.

even all of the pioneers of mechanised warfare - totally understood the potential importance of the integrated role of aircraft in ground operations.<sup>293</sup> Hobart and Broad were among the few that fully understood the importance of air forces to ground support, but both experienced the same obstructiveness from the Air Ministry.<sup>294</sup>

Martel's most significant achievement in the practical and theoretical field of mechanised warfare is without any doubt his book entitled "In the Wake of the Tank" (1931). The tankettes were a practical tool to his ideas of revising the army divisions closer to mechanisation.<sup>295</sup> Based on this tendency, medium tanks were left without any notice, because they were not seen as a useful supplement to the infantry- and cavalry-based forces of the Empire, an opinion also stated by Liddell Hart. To him, these machines signified the rebirth of movement. These vehicles gave the infantry its *coup de grâce*, although financial and political factors were to delay the delivery.<sup>296</sup> Some progress was achieved in making the Tank Brigade more employed on a strategic or semi-independent mission against some important objective in the forces in the enemy rear. The Tank Brigade began to assemble on Salisbury Plain in late 1934 under the command of Brigadier P. C. S. Hobart. It comprised of three battalions RTC. The brigade's transport made it self-contained in fuel, food and ammunition for several days. Anti-tank and anti-aircraft protection and the auxiliary units were an integral part of the Brigade.<sup>297</sup> Hobart agreed with Fuller in seeing no place for the infantry in armoured formations.

Unfortunately, the leading role of tanks was not accepted by all. In the exercise of 1934 the movement of the Mobile Force, consisting of a mechanised infantry brigade, mechanised artillery brigade and the tank brigade, was eventually stopped when it became evident that it was about to cut loose and encircle the infantry of the opposite side. Finally, the movement became more complicated, because infantry defenders were able to establish obstacles to stop the tank movement.<sup>298</sup> Due to the strict timings, which prevented any significant move by night, the exercise turned to be an effort to boost the morale of the infantry at the expense of the RTC.<sup>299</sup> The organisation was reviving the original 1927 Mechanised Force experiment on

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<sup>293</sup> Bond (1980), p. 323.

<sup>294</sup> Messenger, p. 84.

<sup>295</sup> Messenger, p. 77.

<sup>296</sup> Liddell Hart (1927), pp. 18, 63 – 73; Liddell Hart (1935a), p. 115.

<sup>297</sup> Bond (1980), pp. 164 - 165.

<sup>298</sup> Macksey, p. 132.

<sup>299</sup> Messenger, p. 83 - 84.

a larger scale. It still proved a similar disappointment. The mixture of tanks and infantry did not “become an amalgam”.<sup>300</sup>

The strategic manoeuvre was seen as a movement of the whole army or by a detachment.<sup>301</sup> In addition, it should be remembered that British Army infantry troops maintained the offensive and manoeuvring style of WW I during the interwar years. According to this strategic doctrine, the role of armoured troops was to function as a mere auxiliary arm. Any strategic thrusts by the armoured forces against the enemy lines of supply were not considered during the 1930s, because a wholly armoured force “might inflict nothing more than a deep wound on the body of its adversary.”<sup>302</sup> Perhaps no strategic aims were in Liddell Hart’s mind either when he suggested that the tank brigades could complete any “1914 manoeuvres and return with the main army without any transport at all if necessary”.<sup>303</sup> Besides, the purpose of the Tank Brigades was to support the infantry closely rather than to carry out independent roles in the rear of the enemy.<sup>304</sup> Similar hints of the British Army’s pragmatic approach to any theories of war can be seen in the Tank and Armoured Car Training manual (1927). It was mentioned that the amount of tanks used in any given operation must be based on the nature of the task involved and not to any preconceived ideas, which are “based on any theory as to a normal allotment”.<sup>305</sup>

The whole mechanisation process profited and lost at same time when the first steps toward the mechanisation of cavalry were made in 1935 and when the conversion of 28 infantry battalions into mechanised machine-gun battalions was decided on 1936. The unsuitable role of cavalry units in modern warfare was finally understood in the British Army high command, but the whole process was realized at the expense of the expansion of the RTC. The modernisation has to be seen as an accessory part of the new interest directed at the BEF. These troops were neglected until 1934 when the British government finally decided that Germany was their potential enemy.<sup>306</sup> Even if it is reasonable to see the mechanisation of the British Army as a justifiable step in the process of Army modernisation, the decisions made in the mid-1930s laid down the terms of the development of the Armoured Forces. It was decided that one battalion of slow and heavily armoured tanks was to be provided for close

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<sup>300</sup> Liddell Hart (1935a), pp. 233, 292 - 293.

<sup>301</sup> Field Service Regulations (1935), p. 22.

<sup>302</sup> Liddell Hart (1935a), p. 178; Winton, p. 123.

<sup>303</sup> Liddell Hart (1935a), p. 279.

<sup>304</sup> Lester, p. 48.

<sup>305</sup> Tank and Armoured Car Training (1927), p. 23.

support duties in each infantry division.<sup>307</sup> In fact, this conclusion was the main reason why tank production was heading for the close-supporting role. By the end of 1936, the great majority of existing armored vehicles were light models suitable only for colonial warfare.<sup>308</sup> Even Broad's five-year plan designated to produce four tank brigades by 1935 failed. After this episode Broad finally concluded that, it was probably too much to expect any fundamental remodeling of the Army organisation.<sup>309</sup>

George Lindsay's idea of the Mobile Division provided a more balanced fighting organisation between various branches. The proposal to organize the Mobile Division in 1934 is presented in Appendix 3 (figure 2). At the end of the 1934 training season the opportunity came to test his concept. The mobile force was an amalgamation of Lindsay's 7th Infantry Brigade and Hobart's Tank Brigade. In addition to the two principal units, the *ad hoc* force consisted of other supporting branches. Lack of cooperation, unexperienced Mobile Force staff, restrictions limiting flexibility and a lack of agreement in a common plan finally undermined the value of the experimental work.<sup>310</sup> One typical idiosyncrasy that recurs constantly during the operation in WW II can be found. I am of the opinion that it is the preserving of the spheres of responsibilities between different branches. Tank and infantry brigades operated too separately and seemed to be bound by too rigid and unflexible patterns to form one coherent fighting unit. This feature seemed to be a characteristic and an obstacle during the fiery years of North African campaigns in WW II. Even in the Training and Manoeuvre Regulations (1923) there was pointed out that it should be "desirable that officers of all arms" take part in cooperation exercises.<sup>311</sup>

The establishment of the Mobile Division (later Armoured Division) had been approved in 1935 (see Appendix 3, figure 3). It was officially formed only in 1937 and even though it was only a transitional stage, it was an important one.<sup>312</sup> It is the same organisation presented by Lindsay, although there are some striking differences that I like to emphasize. Firstly, in the 1937 organisation two Infantry Battalions have replaced the Infantry Brigade. Their role as a part of a supporting section inside the division becomes even more obvious in the organisation of the Armoured Division (1940). Despite their cooperation with the armoured

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<sup>306</sup> Bond - Alexander, p. 611.

<sup>307</sup> Bond (1980), pp. 170 - 171.

<sup>308</sup> Bond - Alexander, p. 618.

<sup>309</sup> Bond (1980), p. 155.

<sup>310</sup> Winton, pp. 178 - 181.

<sup>311</sup> Training and Manoeuvre Regulations. The (British) War Office. London 1923, pp. 34 - 35. See also, p. 75.

cavalry regiments, the mutual tank-infantry tactics failed to take clear form. Secondly, Lindsay's innovative idea of putting an air force unit into the organisation was deleted as inappropriate (the idea was later used by the German Armoured forces during WW II). Thirdly, the artillery did not manage to develop the techniques for supporting rapid moving armoured formations. Fourthly and most dramatically, the division's supply and administrative units were not gathered together. Some parts of them, including maintenance and fuel supply units, had not even been formed. Lastly, as Winton pointed out, the debate between the advocates of the formation of a tank-composed armoured division and a lightly armoured cavalry division had never been conclusively resolved. The other debate between the full Continental commitment and the "limited liability", which called Britain to contribute air and naval forces to a future Continental war, had neither been resolved at the end of 1938.<sup>313</sup>

It is also clear that in late 1930s the War Office was caught without agreed upon designs for different types of tanks to perform specific tactical tasks, which could be mass-produced quickly if necessary. Infantry tanks were to be reduced from the target of 833 to 340 and medium tanks from 247 to nil. The late 1930s saw a different kind of development. It was not until 1937 that the War Office had arrived at producing three different kinds of tanks to fulfill different roles.<sup>314</sup> However, the organisational development from the latter part of the 1930s demonstrated the British capability to comprehend future demands for armoured organisations. The final outcome of the armoured divisions in 1940 does not entirely do justice to this marvellous and successful process.

### 3.3 Simultaneous Development of Armoured Warfare Ideas in Other Countries: Some Observations

"Tomorrow the professional army will move entirely on caterpillar wheels. Every element of troops and services will make its way across mountains and valleys on the appropriate vehicles. Not a man, not a gun, not a shell, not a piece of bread, will be transported in any other way."

General Charles de Gaulle, 1934.

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<sup>312</sup> Bond (1980), p. 178.

<sup>313</sup> Winton, pp. 174 – 176, 204.

Naturally, the British Army was not the only one elaborating armoured warfare ideas. France had made considerable progress in the development of mechanisation in the 1920s, although as suggested by General Charles de Gaulle, it had failed to develop mobile forces capable of mounting a rapid counter-offensive without general mobilisation. He estimated that France would need professionals capable of mastering the technological complexities of armoured formations. The official doctrine of the mechanised divisions was still only to restore and replace the traditional task of cavalry troops.<sup>315</sup> The ideas of the mechanisation are quite identical between de Gaulle and with General Jean-Baptiste Estienne, the “father” of the tank arm. Estienne insisted that tanks should form an independent branch and be left as general reserve under the commander-in-chief who could use these forces as was formerly done with by cavalry.<sup>316</sup> In reality, a more conservative approach was selected, as the manual of the instructions for the employment of tanks stated, “tanks are only supplementary means, but temporarily at the disposal of the infantry...the progress of the infantry and its seizing of objectives are alone decisive.” The majority of Frenchmen entered the 1930s convinced that the Maginot Line was the answer to their country’s defence problems. The French society was still obsessed, even more profoundly than the British, with the “lessons” of the last war.<sup>317</sup>

De Gaulle had visioned élite forces of 100000 men with the ability to move fast, react quickly and operate independently. The role of the infantry was considered as “occupying, mopping up and organising the territory which the terrible but temporarily power of the tanks will have virtually secured”, just like Fuller had visioned. De Gaulle also visioned a divisional heavy brigade that would have “500 medium guns, 400 light guns and 600 machine guns”. According to Liddell Hart, it would be an organisation of “clumsy monstrosity, impossible to manoeuvre”. Unfortunately for the development to the French armoured ideas, the last war still gnawed at the French mind, making any offensive oriented systems out of the question.<sup>318</sup> Unlike the British and the French, the Germans were able and capable of forming battle groups of all-arm under a local commander to deal with different situations in changing terrain.<sup>319</sup> It should be remembered that the process of mechanisation was in itself hard and rocky in Germany. As late as in 1936 the role of the German *Panzer* brigades was still limited

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<sup>314</sup> Bond (1980), p. 181

<sup>315</sup> De Gaulle, Charles: *The Army of the Future*. J. B. Lippincott Company, Philadelphia 1941 (Originally printed in 1934), p. 134 – 147; Bond (1980), p. 226; Macksey, p. 137; Winton, p. 201.

<sup>316</sup> Bond and Alexander, p. 603

<sup>317</sup> *Messenger*, pp. 99, 188.

<sup>318</sup> De Gaulle, pp. 100 - 105.

<sup>319</sup> Macksey, p. 141.



to the infantry-supporting role.<sup>320</sup> The Germans created ten Armoured Divisions by May 1940 and made no attempt to produce any more infantry supporting tank formations.<sup>321</sup>

The French entered WW II with three types of formations that utilized tanks. The first was the light tank battalion, *Bataillon de Chars Légères*. The vast bulk of French armours were divided up to these Battalions to support the infantry. The infantry was mainly assigned to the passive role of defence. The second was the *Division Cuirassée*, a mixture of cumbersome heavy tanks and light tanks, a total of 158, but with only two infantry battalions. The French would have three of these divisions in 1940. The third was the *Division Légère Mécanique*. It was a more manoeuvrable organisation with all-arms formations. It resembled astonishingly the organisations and equipment of Heinz Guderian's armoured division (mid-1930s), as discerned in Appendix 3 (figures 5 and 6). According to Paul Dyster's modern opinion, it seemed to be trained and led in accordance with "antiquated and unimaginative ideas of cavalry of the late nineteenth century" and therefore it would be merely a case of lost opportunities. Naturally, of the three the *Division Légère Mécanique* offered the best hope of matching the capabilities of the German armoured divisions. Unfortunately, their use was too narrowly defined to counter the German advance during the lightning war of the summer of 1940. Both French and British armoured divisions had the same ideas of performing only narrowly defined objectives, although little improvement had been made since the days of the "Plan 1919".<sup>322</sup> Finally, all French armoured divisions were destroyed separately one by one during the merciless summer of 1940.<sup>323</sup>

At the same time, the Soviet Army had made great progress in the development of both *matériel* and doctrine. By 1935 Soviet tank, strength ranged from three thousand to ten thousand. Soviet tanks were included in motorized forces and in the strategic reserve to take out the enemy artillery. The primary role was still infantry support. This was a compromise between the modernizing elements in the Red Army associated with Marshal Mikhail N. Tukhachevsky and the more cautious infantry commanders of the Civil War. Harold Winton argued that the Soviet Army was attempting to develop through industrial production an army that combined mass, mobility and firepower, although the mental resources were not sufficient to produce a modernised mass army. This was in stark contrast to the German solution in which mobility was provided by the *élite* armoured divisions and firepower and

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<sup>320</sup> Messenger, p. 91.

<sup>321</sup> Bond (1980), p. 328.

<sup>322</sup> Dyster, pp. 183 – 187, 191 - 192.

<sup>323</sup> Dyster, p. 263.

mass by the more immobile parts of infantry divisions. The French emphasised firepower and mass to the virtual exclusion of mobility.<sup>324</sup> Another brilliant Tsarist-trained officer, Vladimir Kiriakovich Triandafillov, focused on the importance of the “shock army”, a versatile force composed of all arms, including aviation. This army would be equipped with “manoeuvre tanks” in contrast with tankettes or heavier infantry tanks. His mechanised forces would become organic to corps, armies and divisions.<sup>325</sup>

Eventually, the Soviet Army was equally divided into two different armies: mechanised and motorised forces and the bulk of the infantry on foot.<sup>326</sup> The Red Army experimental mechanised force was expanded into a brigade size formation. The Russians continued to exercise their doctrine of combined arms. Finally, aviation was to be used on a mass scale in support of the ground forces, much reflecting German thinking and illustrating the close cooperation reflected in the two armies and air forces at this time. Naturally, some similarities between Fuller’s “Plan 1919”, Liddell Hart’s “Expanding torrent” and Tuchachevski’s ideas of deep decisive raids can be found. Tuchachevski’s ideas were based on a decisive offensive action concluding persistent pursuit, which “leads to complete annihilation of the forces and means of the enemy”. No references to the “limited” attacks against the enemy headquarters and lines of communication were presented;<sup>327</sup> thus, there are clear similarities to Liddell Hart’s ideas of deep strategic penetration and the clear pattern to carrying through the idea of expanding torrent. The first stage would be an attack by assault groups. Next, the support groups would be pushed through followed by the decisive breakthrough with tanks and motorised infantry. Finally, there would be the pursuit phase when airmobile forces would join the mechanised forces for deep penetration into enemy territory. Unfortunately, Soviet doctrinal gains were nullified by Stalin’s purges of 1937, which fell hard on the mechanized reformers.

By 1938 the British Army’s armoured doctrine was still ahead of the Americans and the French, but they lagged seriously behind the Germans in mechanical warfare concepts, organisational development and practical experience in the manoeuvre of large armoured formations over extended distances.<sup>328</sup> Heinz Guderian obviously got his ideas from Martel’s and Fuller’s books. As for Liddell Hart, there is uncertainty as to the extent to which he

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<sup>324</sup> Winton, p. 202; Messenger, p. 94.

<sup>325</sup> Simpkin (1986), p. 38.

<sup>326</sup> Messenger, p. 94.

<sup>327</sup> Messenger, p. 97.

<sup>328</sup> Winton, pp. 202 - 203.

actually influenced Guderian. Later after the war, Liddell Hart himself naturally accentuated the value of his theories to German military success. He also scorned French sarcastical approach the to army mechanisation.<sup>329</sup> The experimental work done in Salisbury Plain influenced Heinz Guderian. He seemed to clarify his thoughts on the primary role of tanks versus other arms during the late 1920s.<sup>330</sup> Some Germans recognised explicitly that the best way to use armoured forces was to strike and not to fix. With this clear tactical thought in mind, they built their organizations to match this cornerstone. The German tank enthusiasts had not failed to see that armored mobility, the wireless radio and the airplane had changed the elements of war.<sup>331</sup>

I came to the same conclusion as Charles Messenger when comparing the organisation of the Experimental Force and Guderian's emphasis on armoured division. They resembled each other surprisingly as presented in Appendix 3 (figures 1 and 6). Guderian's thought about the "all-mechanised" organisation, able to respond to the manoeuvrability of tanks, has many similarities to Liddell Hart's ideas. The abandonment of George Lindsay's proposition of the organisation of the Mobile Division (1934) was symptomatic of the sidetracked trends of the British armoured doctrine. Heinz Guderian had visioned that the other weapons supporting the tanks should be "brought up to their standards of speed and crosscountry performance" presenting the tanks playing a primary role.<sup>332</sup> It must be kept in mind that in the original German armoured division (1935) there were 561 tanks in 16 tank companies. This organisation was similar to Guderian's division, though the armoured division was divided into two armoured regiments, both having two armoured battalions. This organisation was put into the test in peacetime manoeuvres and the amount of infantry battalions was increased. Thus, on the eve of the 1940 French campaign, nine out of the ten Armoured Divisions each had four and one even five infantry battalions. Incidentally, for reasons unknown, these facts seemed to have escaped Allied intelligence.<sup>333</sup>

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<sup>329</sup> Macksey, p. 118; Liddell Hart, B. H.: *The History of the Second World War*. London 1970, p. 21.

<sup>330</sup> Messenger, p. 64; Dyster, p. 197; See also: Bond (1977), p. 216. Bond reminds that the strategic mobility was under constant improvement since the 1920s when General Hand von Seeck, Chief of the Army Command, planned lightning strikes against the superior Polish forces.

<sup>331</sup> Uhle-Wettler, pp. 236 - 240.

<sup>332</sup> Heinz Guderian: *The Panzerleader*, p. 24. Quoted in Messenger, pp. 64 – 65.

<sup>333</sup> Ogorkiewich, Richard (1955a): *British Tank Policy*. In *Armour*, number 1, vol LXIV, January - February 1955. Washington 1954, pp. 24–28, p. 11.

The U.S. Army entered both World Wars late. This emphasized strongly the development of American tactical doctrines.<sup>334</sup> The evolution of American armoured doctrine during the 1930s suffered a similar fate as those of France and Britain: the problems of economic exigencies: traditional thinking and the dominance of cavalry and infantry branches. The American armoured development proceeded in two separate and totally uncoordinated areas in the cavalry and infantry. Mechanised forces were to assist the older arms, not to replace them or act on their own.<sup>335</sup> General Douglas MacArthur stressed more the mechanisation of cavalry, even though he found several limitations to the use of motor-driven vehicles in certain types of terrain. He estimated that the economical situation would hardly allow to maintain a large number of armoured units and to replace them every few years. He would stress more the strategic mobility of vehicles than fighting power and tactical mobility. Eventually, the latest advances in airplanes and handguns fascinated him more than the unreliable armoured vehicles.<sup>336</sup>

The American J. Walter Christie was a pioneer of tank design since the late twenties. He believed that mobility and agility were far more important than protection and firepower. Unfortunately, the limited funds available prevented the actual mass production. His prototypes were not taken into use in America, but in the Soviet Union, where the Russians immediately pursued it further to “BT tank”. In a roundabout way, Martel, as assistant director of mechanisation, was impressed by Russian tank design and purchased one remaining prototype of the American Christie-tank. This tank was to become known as the famous Cruiser Tank Mark III, that challenged the Italian and German tanks during the first years of the war in Northern Africa during WW II.<sup>337</sup> Thus, the writings of Liddell Hart and Fuller carried detailed reports of the British manoeuvres, their visions of success and ideas of developing the methods of armoured fighting. An American officer, stationed at the American embassy in London, fixed his attention on the enthusiastic spirit of the British to develop their armoured forces. “When such conservative groups as the British are supposed to be put so much of their precious War Department appropriations into this new warfare, there certainly must be something in it”.<sup>338</sup>

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<sup>334</sup> Winton, p. 132. Toward the end of 1927 the Experimental Mechanized Force was patterned on the basis of the British model.

<sup>335</sup> Winton, p. 202; Messenger, p. 108.

<sup>336</sup> MacArthur, Douglas : The Use of The Machine in Battle. In The Journal of Army Ordinance, number 76, vol XIII. January - February 1933. Washington 1933, pp. 198 - 100.

<sup>337</sup> Messenger, pp. 107, 122 - 123.

#### 4 THE SECOND WORLD WAR – THE FOCAL TRAITS OF THE BRITISH WAY IN WARFARE

“Speed, on land as in the air, will dominate the next war, transforming the battlefields of the future from squalid trench labyrinths into arenas where surprise and manoeuvre will reign again.”

B. H. Liddell Hart, 1925.

In Britain, both popular and official opinion had remained deeply hostile to any military involvement on the Continent. Therefore, there were plenty of similarities between the embarrassed negotiations in 1914 and 1939. Nowadays we seem to forget that on neither occasion it was not evident to anyone until war had actually broken out whether a BEF would be committed to Europe or not. The British experienced their own presence in the Continent as decisive in turning the balance of military power, which the invading German armies might otherwise be expected to enjoy in favour of their allies. Anyhow, war in Europe would certainly mean trouble elsewhere in the Empire, because of the lack of the forces to defend every single territory.<sup>339</sup>

The final version of the Armoured Division was put to the test during the battles in France in the summer of 1940.<sup>340</sup> The BEF was indeed no longer dependent on horse transport, even though the quality of motorisation was not at the level the Army would have expected.<sup>341</sup> The Armoured Division remained an accumulation of units, based on the thought of future armoured warfare.<sup>342</sup> The use of armoured units was defined as a “valuable instrument of manoeuvre”, to be used to “compel the enemy, by attack or threat of attack”. They were ideally situated sufficiently far away from the line of battle, because “their mobility enables them to reach the front rapidly when required”.<sup>343</sup> In the words of its Support Group commander, “still more a basis for argument than an instrument of war”.<sup>344</sup> The 1st Armoured Division landed at Calais only to do some desperate fighting against the Germans and to enter defensive positions around Dunkirk.<sup>345</sup>

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<sup>338</sup> Mettler, Charles G: *The British Armoured Forces. What of Our Position as to This New Kind of Warfare.* In *The Journal of Army Ordnance*, no 55 July-August 1929, Washington 1929, pp. 7 – 18.

<sup>339</sup> Howard (1974a), pp. 31, 58, 105.

<sup>340</sup> Macksey, p. 182.

<sup>341</sup> Bond (1980), p. 329. Much of the transport consisted of civilian vans and lorries from the towns of England and they usually were in bad repair.

<sup>342</sup> Bond (1980), pp. 180, 186 - 187.

<sup>343</sup> Field Service Regulations (1935), p. 20.

<sup>344</sup> Winton, p. 220.

The basic idea of the organisation of the 1st Armoured Division is presented in appendix 3 (figure 4). One reason for the unsuccessful execution of the mission was the problem of the War Office to find a proper commander for the Division. Finally, it was cavalryman Major-General Roger Evans who took the division to France in May 1940. The War Office had made its decision cautiously, because they tried to avoid all “ambitious radicals susceptible to the dangerous influence of Liddell Hart”.<sup>346</sup> Even in peacetime the Army had experienced problems of cooperation between the infantry and the RTC. Tank corps had practiced so independently in the Salisbury Plain that many of Britain’s senior commanders failed to appreciate the value and correct usage of armour in the first years of the war.<sup>347</sup> Besides, for several years there had been no large-scale manoeuvres as part of the economy drive. Even the regular divisions lacked basic tactical skills.<sup>348</sup> The experiments in Egypt and at the Salisbury Plain had been unique opportunities to produce armoured warfare tactics. Unfortunately, these practice environments were tactically misleading when put into practice in the European battlefield. A higher ratio of infantry was needed. The separate motorized infantry battalions of the support group were added to tank brigades after the failure in France. Finally there were four infantry battalions to three tank battalions. In addition, for additional firepower a second artillery battalion was added.<sup>349</sup>

It is peculiar that no lessons had been learned from the Spanish Civil War. It was interpreted that victory was achieved by defensive measures. The testimony of the infantry as a “core and essential substance of an army“ was eventually strengthening. Only the Germans appreciated the value of the lesson in this field. As a “dress rehearsal” of the *Blitzkrieg*, the Germans tested the elements of armoured forces, air force and the cooperation between services and arms. The German armoured spearheads avoided engaging any strong enemy opposition. Finally, what was newsworthy was the notorious German bombardment of the town of *Guernica*. It displayed the threat of strategic bombing against the civilian population. The tactical air operations in Spain were left into the background, whereas the value of the strategic bombing in Russia was appraised as fruitless. The value of close support to the ground forces was recognised.<sup>350</sup>

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<sup>345</sup> Dyster, p. 265.

<sup>346</sup> Bond (1980), p. 178.

<sup>347</sup> Fletcher, p. viii.

<sup>348</sup> Bond (1996), p. 270.

<sup>349</sup> Messenger, p. 177.

<sup>350</sup> Messenger, pp. 115, 138.

Liddell Hart considered the Battle of France one of history's most striking examples of the decisive effect of a new idea, as a "dynamic executant" carried it out. He praised the British tank enthusiasts in grasping the potentials of these ideas earlier than Germans. Nevertheless, it was obvious that long-range tank drives to cut the "main arteries of the opposing army far back behind its front", was his main thesis. The effect proved to be as decisive as new ideas had been in earlier history, as Liddell Hart lists, "the use of the horse, the long spear, the phalanx, the musket, the gun". Indeed, Liddell Hart estimated that the new application had been even more immediately decisive. Especially the line of the operation during the manoeuvres in the spring of 1940 through the hilly and wooded country of the Ardennes impressed him. This operation certainly reminded of his interwar period writings of the hardy "Great Captains", who were ready to undertake the most hazardous indirect approaches - over mountains, deserts or swamps if necessary, with only a fraction of force.<sup>351</sup>

The trend in terms of total number of tanks in different organisations reached its bottom lines during the first years of the war. In 1935 the amount of armours in German armoured division was 561 on paper, in 1939 over 300 and finally in 1941 somewhere between 150 and 200. The Germans had placed an incredible strain on the development of their motor vehicles. This was necessary in maintaining the strategic mobility of the division, which, in addition, needed a large number of transports in its supply columns though the brunt of the logistics burden was carried by horses.<sup>352</sup> In 1943-1944, the German Armoured Division had almost the same amount of battalions as the British division of 1942 had. The only difference was one armoured battalion more in the British organisation. The actual reason for the Germans to reduce the amount of tanks in their armoured divisions was due to the shortage of armoured units.<sup>353</sup>

#### 4.1 The Policy of Limited Liability – The Way to Dunkirk?

"The Future of War Lies in the Future of Peace."

B. H. Liddell Hart, 1925.

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<sup>351</sup> Liddell Hart (1929), p. 143.

<sup>352</sup> Dyster, pp. 272 - 274

<sup>353</sup> Ogorkiewich (1955b), pp. 12 - 13. A German armoured division had an armoured regiment and two infantry regiments. All had two subordinate battalions.

Liddell Hart's indirect approach, the policy of Prime Minister Neville Chamberlain and the "road to Dunkirk" are sometimes seen in the same context, although they are not at all interrelated. According to Brian Bond, Liddell Hart's strategic outlook was in harmony with Neville Chamberlain's anyway, and was widely shared in Government circles.<sup>354</sup> Practically, limited liability meant the "commitment of the fewest possible troops and ideally none at all to a European alliance".<sup>355</sup> The most important role of the British troops would be to convince the enemy that he cannot conquer, thus equalling grand strategy with deterrence. Limited liability would be an act of conserving energy.<sup>356</sup> As a journalist himself, Liddell Hart did not share the soldiers' antipathy to that profession. He had no strategic theories of his own, but almost impatiently meddled into the Carwell system, the Continental commitments and the garrison in India. His association with British politics compromised his status as an independent critic, but he had not gained real authority in compensation. He was associated with official policies and was soon discovered to have had an unfavourable reputation.<sup>357</sup>

But what were Liddell Hart's motives for becoming an intercessor of the defensive after decades of mechanisation and manoeuvre thoughts? Brian Bond tried to speak in Liddell Hart's favour when he argued that Liddell Hart was fundamentally opposed to the idea of sending even a single soldier to the Continent. In fact, he wrote in *The Times* in March 1939, "we have no Army to send to the immediate assistance of France".<sup>358</sup> Liddell Hart argued that the technological innovations were rendering the defence ever stronger in comparison to the attack.<sup>359</sup> The motorisation of the armies was therefore more likely to strengthen the defensive than to revive the power of the offensive. Motors were a means of bringing small arms, not huge armies, rapidly to the scene of action.<sup>360</sup>

This prominent change in Liddell Hart's attitude towards armoured forces had to do with the realistic discovery that no sufficient British armoured forces existed. I was quite amused to discover that Heinz Guderian had shared similar thoughts. He proposed in his book (1937) that Britain would need a small and mobile army, which should be "a comprehensively

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<sup>354</sup> Bond (1977), p. 111.

<sup>355</sup> Bond - Alexander, p. 612.

<sup>356</sup> Liddell Hart (1939), pp. 43 - 44.

<sup>357</sup> Bond, Brian: *Outsider's Influence on British Defence Policy in the 1930s*. Report of the Tripartite Seminar held at the RUSI on 11 November 1981. In Royal United Services Institute for Defence Studies, number 1, vol 127. March 1982, pp. 12 – 13.

<sup>358</sup> Bond (1977), pp. 105 – 106; Dyster, p. 219.

<sup>359</sup> Bond (1977), p. 97. Liddell Hart suggested that machine gun established the superiority of the defence in the last war. The anti-tank and the anti-aircraft guns were, according to Liddell Hart, also defensive weapons.

<sup>360</sup> Liddell Hart (1935a), p. 70.



motorized and mechanized army, which could move at great speed and strike to great effect.” Any “conventional” divisions would be wasted, since “Britain’s allies had plenty of those already”.<sup>361</sup> The sacrifice of British minor resources in Continental battles was therefore absurd. Certainly, the counterinnovations within the anti-tank weapons influenced the thoughts of his contemporaries similarly as the advance of the precision guidance technology influenced the tactical inspirations after WW II. Reciprocally, Liddell Hart improved German WW I strategy. The German attempt to launch a similar encirclement attack as implemented in Cannae had turned to be a failure. Had they been striking at an economical or political centre like Paris instead, the result would have been quite different.<sup>362</sup>

British strategy had had some enduring traits since the Napoleonic Wars. In fact, Liddell Hart combined the similarities of British strategic and tactical thought. In spite of traditional features, Liddell Hart did not consider the tactics of land warfare as the prime feature of the British way in warfare, but rather the flexibility given by the dominance of the seas. Examining the conduct of war from Elizabethan times through the wars against Napoleon, Liddell Hart finally concluded that the military expeditions to the Continent were only one part of the traditional grand strategy of indirect approach.<sup>363</sup> As the Continental experiences seemed to be a secondary operation, he seemed to share Henry Lloyd’s ideas, as both valued the marines more than land forces. Actually, Lloyd put it quite sharply; “land forces are nothing. Marines are the only species of troops proper for this nation; they alone can defend and protect it effectively.”<sup>364</sup>

Eventually the form of rearmament rather than its slow pace was decisive in forming the army doctrine. No coherent doctrine existed when WW II finally broke out. There were two opposing concepts competing with each other. The concept of Continental intervention called for the immediate dispatch of a modern expeditionary force backed by a well-equipped territorial army. The opposing concept was based on Liddell Hart’s favoured “limited liability”, which called for Britain to contribute air and naval forces to a future Continental war, but to avoid any large scale contributions on the scale of WW I.<sup>365</sup> Actually Liddell Hart estimated that the whole role of an expeditionary force could be handed over to the RAF. The Army should be kept in its proper role of guarding the Empire and forming an Imperial

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<sup>361</sup> Guderian, p. 140.

<sup>362</sup> Liddell Hart (1925), pp. 32 – 33.

<sup>363</sup> Liddell Hart (1935a), pp. 29 - 42.

<sup>364</sup> Liddell Hart (1935a), pp. 32 - 42; Henry Lloyd (1792), pp. 14 – 15.

<sup>365</sup> Winton, pp. 176, 209.

reserve.<sup>366</sup> The Government's chief industrial adviser Lord William D. Weir also stressed that the role of the RAF and thought that especially its offensive bombing role should take priority.<sup>367</sup> Problems arose when it was realized that the RAF's bombers could not properly reach Germany unless they operated from bases in the Low Countries. Therefore, it was finally decided to accept the limited commitment of six divisions.<sup>368</sup>

In *The Times* in October 1937 Liddell Hart criticised the slow development of mechanised forces and new tactics in the British Army. He unexpectedly suggested that the initial attacker had rarely succeeded in any battle in the past six centuries and had even less chance of doing so at the present or in the near future. He disputed the view that mechanised divisions would be able to pierce the defender using the "Expanding torrent"-theory except where the enemy was taken by surprise and where the opponent was unmechanised. He did not even believe that the development of air power could radically alter the balance.<sup>369</sup> Liddell Hart had concluded some years earlier that the strike made by armoured forces was not to take place in the back of the enemy troops in accordance with his original "Man-in-the-Dark" theory, but to eliminate his communications, destroy his headquarters, signal centres and sources of supply. He had changed his views more closely to Fuller's "Plan 1919" and to officially approved aims. If the first "ground fist" did not have an effect on the adversaries' mostly military based Achilles' heel, the second "aerial fist" was to aim at the large ground organisation of a modern air force.<sup>370</sup> According to Liddell Hart, the British Army's "pathetic unpreparedness" for any kind of war was obvious, but the reason for the chosen strategy was hidden under his own strategy of indirect approach.<sup>371</sup>

Liddell Hart marked in his *Memoirs* that he did not foresee that German mechanised forces would overrun the French territory, but rather that the French and the British would themselves attack the Germans.<sup>372</sup> Liddell Hart himself argued that the role of the armoured force should be a "protective skin simply for a close approach". Risking any of the few armoured troops was therefore pure insanity. The more concentrated a modern army was, the

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<sup>366</sup> Liddell Hart Papers 11/1935/90, Talk with General Sir John Burnett-Stuart, 26 Aug. 1935. Quoted in Bond (1980), p. 216.

<sup>367</sup> Bond (1980), p. 223.

<sup>368</sup> Carver, p. 53.

<sup>369</sup> Bond (1977), p. 97. Liddell Hart suggested that the machine gun established the superiority of the defence in the last war. The anti-tank and the anti-aircraft gun are, according to Liddell Hart, also defensive weapons.

<sup>370</sup> Liddell Hart (1935a), pp. 71 - 72.

<sup>371</sup> Bond - Alexander, p. 612.

<sup>372</sup> Bond (1977), p. 96.

more vulnerable it would be because of the threat from the air.<sup>373</sup> He saw the future in the light of history and so he could not imagine that the arms technology and doctrine could produce such a devastating result like the Germans did in WW II. He underestimated the capabilities of the German army and had too much confidence in the French and their Maginot Line. John J. Mearsheimer claims that the fall of France in 1940 damaged Liddell Hart's reputation because he could not foresee the disaster. Only the defeat of the Axis forces gave Liddell Hart an opportunity to rescue his reputation. Thus, it was not merely Fuller who had been surprised by the success of manoeuvre, and who had argued that "tanks are out of place in mountainous or thickly wooded country".<sup>374</sup>

The British Army learned the hard way and partly also from their own mistakes. After having recovered from the shock of the summer 1940, the British Army quickly formed two types of armoured units: the armoured division and the army tank brigades. The former was equipped with medium "cruiser" tanks and the latter with heavy infantry tanks. The process of moulding the character of these new compositions would not have been so smooth as it might have been if it had not been for the tremendous pioneer work done during past decades. The organisation of armoured divisions underwent continuous changes throughout the early 1940s. The organisation also depended of the front for which it was intended. The Appendix 3 (figure 7) shows an armoured division of the Home Forces (1942). The Army tank brigade with its heavy tanks was intended for close support of infantry troops. The total number of tanks in an armoured division was 201 and in an Army tank brigade 178.<sup>375</sup>

#### 4.2 The British Army Implications of Manoeuvre Warfare During the First Years of War

"Your main immediate object will be, as always, to destroy the enemy tank forces."

Order to the Commander of the Eighth Army in North Africa (WWII)

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<sup>373</sup> Liddell Hart (1935a), pp. 72, 211.

<sup>374</sup> Fuller (1943), p. 21.

<sup>375</sup> Handbook on the British Army. 1943. Chris Ellis and Peter Chamberlain (Editors), Redwood Burn Limited, Trowbridge & Esher 1975, pp. 42 - 43

It is fair to recall the military balance of power during the tough years of 1940 and 1941, when Britain and her army fought practically alone against the overwhelming German and also Japanese forces. The war was set in an unprecedented global theatre, which was new in the history of warfare.<sup>376</sup> Liddell Hart called this period characteristically the darkest hour in British history. There was nothing available to reinforce the small section of the British Army that guarded Egypt against the threat of the Italian armies in Libya.<sup>377</sup> Matters took an unexpected turn several times during the North African campaigns since 1940. I have chosen to depict the most important activities in accordance with my frame of reference. There are some peculiar incidents where both tactical and operational level ideas flourished and my intention is to locate these series of events. Naturally, some misuse of armoured forces took place. It is quite evident that the British Army's methods had not changed dramatically from the previous decades. The modification process had been quite straightforward and therefore it is no wonder that since the early 1930s, Liddell Hart actually warned to follow the preceding type orders finally given by the Commander of the Eighth Army.<sup>378</sup>

After the late 1942, British troops fought as part of an Anglo-American coalition, although forces from the British Commonwealth also played an important part in operations. Nevertheless, British troops were no longer free to develop and implement their own operations. Northern Africa was difficult as a combat environment, because the supply routes and logistics were extremely demanding. The peninsula of Cyrenaica is mainly mountaineous and sandy. The population is concentrated in the towns on the coast. The only area suitable for armoured fighting is a long and narrow strip located between the sea and the impassable desert of Quattara Depression. Only few roads existed. The peninsula of Cyrenaica was the Achilles heel of the whole North African campaign, because of its significant strategic position.

During the late 1930s, the British Chiefs of Staff had advised that "the first commitment of our land forces, after the security of the United Kingdom, should be the security of Egypt and of our interests in the Middle East". It is quite obvious that the North African Campaign was to be part of the great strategic struggle for oil.<sup>379</sup> The British and German operations during the first phase of the war are presented in Appendix 5 (figures 1 and 2). Chronologically I will examine first the British operation against the Italians and after that the German operation

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<sup>376</sup> D'este (1996), p. 274.

<sup>377</sup> Liddell Hart (1970), p. 109.

<sup>378</sup> Liddell Hart (1933), p. 222.

against British and other Commonwealth troops. These campaigns were significant for maintaining and safeguarding the routes to the Far East.

The British XIII Corps under the command of Lieutenant-General Sir Richard O'Connor contained British 7th armoured division (Appendix 3, figure 4) and 4th Indian division. The operation "Compass" was launched in the late 1940. The whole idea is displayed in the Appendix 5 (figure 1). The British fighting method was to remain the mobile "masters of the desert", as Liddell Hart put it, while inducing the Italians to concentrate and provide targets. Italians were passive in the area and the British would therefore sally forth and strike at them. After achieving excellent success in the early phase of the operation, the British counterblow was eventually prolonged from an attack of five days to dimensionally much larger operations of two months. Eventually the "Compass" was quite an unconventional operation because it did go according to plan, even though the operation contained a considerable number of risks.<sup>380</sup> Even though the gap between the Italian divisions was as wide as 15 miles, I discern a magnificent ability of the British troops to put in practice modern methods of warfare even under acute danger of losing the whole campaign. The British caught the Italian Army in Libya quite unprepared to respond to any British use of force. The operation of Corps of about 36 000 men and 225 tanks against the Italian 80 000 men but only half of the British number of tanks, is later described as being very original, at least from the British standpoint.<sup>381</sup> Liddell Hart underlined the British tanks' technical supremacy over the Italian equivalents' and its crucial importance in the success of the manoeuvre.<sup>382</sup>

After the failure in Sidi Barrani, the Italian 10th Army commander Marshal Graziani undertook improvements to strengthen defence conditions in the area of Cyrenaica. Unfortunately, his efforts went down the drain in the end. Graziani was ready to withdraw from the Cyrenaica to area as far as the city of Tripoli, but the Italian High Command foiled his attempts. Originally, Graziani was ordered to invade Egypt and he was forced to persuade the Italian Higher Command not to extend the plans of such operation. He arranged the rest of his army into defence along the road that runs through the coastline inside the garrisons of Bardia and the important harbour at Tobruk. The posterior Corps was situated in broad defence positions between Derna and Mechili.<sup>383</sup>

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<sup>379</sup> Howard (1974a), p. 140. Jackson, p. 15, 109.

<sup>380</sup> Bauer, Eddy: World War II. Volume 2. Finnish translation. Translator Mikko Kilpi. Werner Söderström Osakeyhtiön syväpaino, Porvoo 1974, p. 434; Jackson, pp. 15, 25, 31, 37 – 43; Liddell Hart (1970), p. 112.

<sup>381</sup> Bauer, p. 369.

<sup>382</sup> Liddell Hart (1970), pp. 113 - 114.

<sup>383</sup> Jackson, pp. 16 – 23, 54 – 55.

Graziani was better prepared for further outflanking manoeuvres carried out by the British armoured forces, although he left the Corps in Tobruk and Bardia totally alone and easy to surround in the end. What he did not anticipate, as W. G. F. Jackson pointed out, was the inefficiency of pure defensive actions. The confidence was placed on mines, wires and anti-tank ditches and after the attacker had concentrated his overwhelming strength at the point chosen for his breach, it was difficult for the defender to hold large enough reserves for a counter-attack. Eventually, Graziani had plenty of time to arrange his defensive positions because the British troops faced insurmountable problems to make use of the given possibilities to pursue. Firstly, the huge amount of Italian prisoners threatened to bring down the entire British logistics system. Secondly, the disposition of the 4th Indian Division with the inexperienced 6th Australian Division took place at a bad time.<sup>384</sup> Liddell Hart blamed the British High Command for not realizing what an immense opportunity O'Connor's victory offered. One explanation was the remoteness of the High Command from the battlefield, which made them ignorant of the changing environment in the battlefield. O'Connor had achieved much more than could have been expected from his meagre resources.<sup>385</sup>

The 6th Australian Division, with the support of the "I" (infantry) tanks (called *Matilda*) of the 7th Armoured Division breached the defence of each garrison. After the British 7th Armoured Division had "outflanked" these defensive areas, the 6th Australian Division had no insurmountable problems in giving the final *coup de grâce* by direct assault against the already demoralized Italians. The defeat at Sidi Barrani and the loss of Bardia had a paralysing effect on the morale of the Italian troops in East Africa.<sup>386</sup> After attacking against organized resistance the British troops assumed the pursuit. Unfortunately, the pace of the offensive was reduced dramatically because of the unsuitable ground mobility of the British and the prolonged lines of supply.

The sudden and unexpected Italian evacuation of Cyrenaica forced the Commonwealth troops to attack immediately. It was to be an attack on a double axis. The encircling bold manoeuvre, emphasized by Liddell Hart, was carried out by the Armoured Division from Mechili to Msus and onwards to the road nearby Beda Fomm. The encirclement turned to be a virtual massacre

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<sup>384</sup> Jackson, pp. 54 – 55. The Commonwealth troops were naturally a desired addition to the British troops, but there seemed to be some problems in the chain of command, because they were under the authority of their own home governments and not the British War Cabinet in London. Besides, they were more enthusiastic to follow their own way under their own commander within the overall British plan. The Australians were also keen to follow the fighting traditions of their forebears in WW I.

<sup>385</sup> Liddell Hart (1970), pp. 114 -115.

<sup>386</sup> Jackson, pp. 20 – 21, 57 – 65; D'este, p. 275.

of Italian troops between Benghazi and Beda Fomm. First, the escape route was obstructed near Beda Fomm. The Italians were soon packed along the road and tried desperately to break the roadblock. Next, the 7th Armoured Division engaged the flank of Italian troops on a broad front of 60 kilometres. This battle sealed the fate of the Italian 10th Army. Everywhere the Italian infantry and other troops surrendered in crowds when they had lost the protection of their tanks. The Italians lost altogether about 100 tanks whereas only four were lost on the British side. The achievement was splendid particularly because the 7th Armoured Division had mechanically been on its last legs already weeks earlier. Beda Fomm was in fact the last battle fought in Africa by Britain's pre-war professional army. Anyway, neither the German Supreme Command at the time nor Liddell Hart afterwards could understand why the British did not exploit the difficulties of the Italians by pushing as far as to Tripoli and cleared North Africa in early 1941. O'Connor and his staff were confident that they could have captured Tripoli.<sup>387</sup> This error of forfeiting the opportunity led to the well-known intervention of the Germans.

The unexpected and quick arrival of the German troops in North Africa changed the balance of power dramatically and launched the second phase of the campaign. The German troops under the command of General Erwin Rommel launched much the same kind of operation as the British did only few months later (Appendix 5, figure 2). Although the parallel of the line of operation between these two operations was much the same at a quick glance, the implication was quite different. The battlefield equations were not so much in favour the British troops because there were only parts of the 9th Australian Division and the 2nd Armoured Division available in the peninsula of Cyrenaica. The British High Command in Africa failed in their estimation that the German attack would be launched no sooner than in mid-May because of the lack of adequate logistics for an operation of 650 *kilometres* from Tripoli to Benghazi. It is fair to mention that the German troops were totally unexperienced to desert conditions unlike the British and they were not expected to be re-forming quantitatively so quickly.<sup>388</sup>

The British troops were too widely dispersed around the Mediterranean area. The Commonwealth troops being nowhere strong enough ended up in humiliation in Cyrenaica during the following months. After a cautious offensive behind El Agheila, Rommel decided to try to encircle the British troops by intercepting their routes of disengagement. He had only

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<sup>387</sup> Jackson, pp. 64 – 69, 109; Liddell Hart (1970), pp. 111, 116 – 119; See also: Liddell Hart (1950), pp. 12 – 19.

<sup>388</sup> Jackson, pp. 76, 85, 94 – 96.

two small-scale divisions, the 5th Light, the 15th *Panzer* and the Italian troops. Rommel formed several columns on an *ad hoc* basis. He placed these under whatever German commander happened to be available and whom he could trust. The important crossroad at Mechili came into German possession after the detachment of Count Schwerin, which included parts of Italian “Ariente” Division and German reconnaissance and anti-tank detachments, penetrated ruthlessly across the enemy lines to Mechili. Rommel put remarkable efforts on thrusting his vanguards to cut the Commonwealth’s withdrawal routes to the east. The 2nd Armoured Division wore out during the chaotic days. The 3rd Indian Motor Brigade had just arrived into the area only to find itself surrounded. Luckily, it managed to withdraw from the hands of the Germans. The collapse of the British and Australian defences was speeded up as a result of a ruthless German manoeuvre. In weeks, the whole battle for the control of the peninsula of Cyrenaica was over. The Tobruk garrison fixed several Italian and German divisions and it remained invincible during these campaigns, even though it had almost become an obsession to Rommel.<sup>389</sup>

I would consider the effect of the audacious German thrust as magical. Nevertheless, the difference of the British and German manoeuvres during the first months of the battle are not as evident as I expected to find out. 7th British Armoured Division had performed skilled and bold tactical manoeuvres against the Italians. Certainly, the extreme prudence of the use of small numbers of troops is noteworthy, although the fighting ability of the Italian troops turned out to be much worse than expected. It is axiomatic that the perfect timing of the Regiments of the 7th Armoured Division in the area caused the effect of quick demoralization amongst the Italian troops. The quick collapse of the Italian resistance was not, however, caused by the technical superiority of their adversary. Technically the tanks were not so different. The answer lies naturally in the tactical skill of implementing the ideas of armoured warfare and even more accentuatedly in the ability to create overwhelming and irresistible tempo. The combat environment was favourable to armoured manoeuvre and it would have been a too demanding task for the Italians to interdict that ability particularly after the battle fought in Mechili. Apart from the fact that the Italians were completely taken by surprise, these easy victories were more or less accomplished by the weakness of the adversary. The Italians were unable to manoeuvre against the attacking British troops and therefore they were outmanoeuvred repeatedly. They were even too slow to withdraw out of the way of the advancing British armours, even though the British advance was relatively slow.

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<sup>389</sup> Jackson, pp. 99 – 109; Fuller (1948), p 109. Tobruk was an important port and there were thousands of tons of supplies.



The appearance of the German troops in North Africa enables comparisons between the German and British operations. As I mentioned earlier, no shattering differences exist. Nevertheless, the Germans pursued self-assuredly or even arrogantly into the disposition of the Commonwealth troops causing a fracture of the backbone of the defence. The British were able to neither hold every open route nor even successfully respond to any step made by the mobile German and Italian detachments. As General Sir David Fraser had written of the British Army of WW II: “It rarely showed the handiness in mobile battle which was the hallmark of the Africa Korps”.<sup>390</sup> The role of the British 2nd Armoured Division was regrettably modest. The decentralized use of the Division and the possibly inexperienced staff may have weakened its effective operating. There are no reasons for suggesting that the German forces had the advantage of having superior tanks compared to the British vehicles, although their medium tanks were more reliable in desert conditions after they had been modified.

I much agree with W. G. F. Jackson’s ideas that it was rather the tactical use of tanks and other arms of the service to accomplish a given mission that was even more accentuated in the desert conditions. During the campaigns of the early summer-to-summer 1941 the British troops were constantly surprised by the smooth cooperation between German arms. This interoperability made the Germans the masters of tactical problems. Their fundamental philosophy was different from the British drills: they used anti-tank guns like the British to kill tanks, but contrary to the British they used tanks to kill infantry, and artillery to kill anti-tank guns and infantry. The cooperation between the Commonwealth’s arms was much more complicated, because the Royal Armoured Regiments manned all the tanks. This worked when things went well, but led to unfortunate counteraccusations when they did not.<sup>391</sup>

First of all, the overwhelming tempo of the German troops subdued the Commonwealth troops. The British 7th armoured divisions operations, though successful, were planned to perform clearly the British conception of the art of war, as the objectives of 7th armoured division were planned prudently according to short-ranged tactical goals. Instead, the Germans tried to reach the intended end state of the operation even more indirectly than what the British troops were able to perform. Rommel formed the detachments to perform specific tasks. The use of *ad hoc* organisations displayed adjustment to changing situations, though the number of troops was eventually not so much in favour of the Germans. Rommel even made some changes in the organisation during the first days of battle to be able to cut the avenue of

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<sup>390</sup> D’Este, p. 297.

<sup>391</sup> Jackson, pp. 130 – 131.

retreat of the Commonwealth troops. Any demoralizing effects did not take place among the British defenders, though the German breakthrough was unexpected and rapid. Therefore the approach of the Germans would not fulfil entirely the demands of Liddell Hart's indirect approach. Had Rommel reached Cairo, the result would have been quite different. However, such "Sherman's march" was not typified (Appendix 4, figure 1).

#### 4.3 British Respond to the Threat of *Deutsches Africa Korps* - Montgomery of Alamein

"Methodical progress; destroy enemy part by part, slowly and surely."

General B. Montgomery's general conduct of the battle

Rommel himself demonstrated the advantages of single-minded personal command and was not to be stopped until the British found their own equivalent. This was not to happen until the new CINC, General Bernard Montgomery, reached the Western Desert. At the arrival of the new commander the battlefied equiations had become significantly more favourable to Commonwealth troops. The British habit of commanding by consensus and treating all orders as an agenda for discussion was probably better suited to small colonial wars where individual initiative was an immense asset, but it did not work when handling large complex forces in desert conditions.<sup>392</sup> British armoured forces faced several unwanted misfortunes when tought the "normal lesson" of German smooth cooperation between tanks and anti-tank guns. British tanks were lured into antitank traps while chasing German tanks. For example, the 1st British Armoured Division lost nearly half of their 150 tanks in the first engagement near Antelat (south to Beda Fomm) during the late January 1942.<sup>393</sup> Some tactical inspiration was found under the hard conditions. A small but very important tactical formation of "Brigade group" was created – even though its role was accentuated during the Cold War period. It represented the typical British concentration on tactical level functions, but also their ability to change tactical methods and organisation radically in the midst of a campaign.<sup>394</sup> Officers seemed to enjoy commanding these small and mixed forces of field guns, anti-tank guns, anti-aircraft guns and motorised infantry, as they appealed to the "privateering instincts" of British officers. Actually, the lack of tanks was the main reason for the development of these organisations.<sup>395</sup>

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<sup>392</sup> Jackson, p. 132.

<sup>393</sup> Liddell Hart (1970), pp. 267 – 268.

<sup>394</sup> Reid (1994), *The Second World War*.

<sup>395</sup> Jackson, pp. 130 – 131.

The assault waves swept across the Cyrenaica peninsula between the summers of 1941 to 1942. In many ways these campaigns resembled Fuller's ideas of future battlefield, where columns of armoured formations sailed like battleships on the open sea and battles resembled naval battles rather than scenes of wearing and inflexible trench warfare. The Germans seemed to have the logistical advantage on their side during the second raid of Cyrenaica in mid-1942, as they expected to replenish from the British dumps, which would fall into their hands during the quick advance. Though the advance was quick, this time Rommel failed to achieve surprise. Nevertheless, the inability of British troops to handle large forces with speed and determination enabled Rommel to devour Commonwealth brigades one by one. The British seemed to lack a sufficient "grand tactical" (or operational) plan to be able to control their troops properly. There were several problems in the Commonwealth logistics system, because war damages had reduced the capacity of ports, roads and tracks.<sup>396</sup>

During the second German *Panzer* Army's raid in Cyrenaica the defence of Tobruk was eventually coerced to surrender on 21st June 1942. The British lost over 30 000 men as prisoners and a huge amount of material. It was the worst disaster of the war except for the fall of Singapore. The attack reached the line of El Alamein during the early July. The numerical balance of armoured and air forces was slightly in favour of the Germans.<sup>397</sup> In less than three weeks the British had fallen back almost 1000 *kilometres* from their positions in western Cyrenaica. The existence of any "unofficial" battle group organisations or any such battle methods came to end after General Montgomery has taken the command. He visioned the Eight Army to become a strong balanced force, which could not be upset by anything Rommel did. The Army should fight with its original structure. His legendary statement to the Eight Army forces is quite descriptive: "we will stand and fight here. If we can't stay alive, then let us stay here dead". He also scrapped all plans of withdrawal and defensive positions were ordered to be strengthened with mines and wire. He took a strict line in the policy of using armoured vehicles. There would not be any more of the "loosing of the armour in cavalry style" and therefore the British anti-tank guns and tanks in hull-down positions would destroy German armours in the same way the Germans had managed to cause anxiety against British armoured troops. There would be a *Corps de Chasse* of both armoured and infantry division for pursuit missions. Montgomery did not want any more failures and risks were to

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<sup>396</sup> Jackson, pp. 184 – 206.

<sup>397</sup> Jackson, pp. 207 – 244. Rommel was promoted to a Field Marshal in reward for the victory. Very soon the battlefield equation came to unfavor the Germans. It must kept in mind that the number of tanks in the two most important German armoured divisions was at the very beginning of the operation just one hundred and until they had reached the level of Msus this quantity had declined to 71.

be minimised.<sup>398</sup> Apparently, I would conclude that the time of inspiring tactics and gathering experiences of armoured manoeuvre was over. These were replaced by the ideas of methodical warfare under strict control by the 8th Army battle headquarters.

Rommel decided to gamble on capturing British fuel stocks at Alam Halfa with a far-flank movement. Unfortunately, for this plan Montgomery was prepared for such an operation. He had reinforced Alam Halfa with the newly arrived 44th division (Appendix 5, figure 3). Both the 7th and 10th Armoured Divisions contained two Armoured Brigades based chiefly to the organisation of the 1940. The 10th Armoured Division had 210 medium tanks 164 of which were American built “Grants” and 46 British “Crusaders”. The 23rd Armoured Brigade was equipped with infantry tanks. Rommel’s first attempt to break the Commonwealth’s front line failed in early July. The next operation was launched just over midnight of 30th August. The battles in the area of Alam Halfa started the same day the offensive had been launched. Unfortunately, the Great Quattara Depression, with its salt marsh and soft sand, limited an outflanking movement. The attack was finally steered even more northward and the original plan of cleaving attack dwindled to a frontal attack against the defensive positions of the 10th Armoured Division. Liddell Hart pointed out that surprise in aim-point was thus impossible, so Rommel had to “depend on achieving surprise in time and speed.” He hoped to be able to throw off balance the whole Eight Army by striking at the lines of communication and supply areas.<sup>399</sup>

Losses were not significant on either side, but the heavy pressure of RAF caused considerable damage to the advancing German troops. British and German lost just below 2000 men and Italians about 1000 men. British tank losses totalled 67 against the Axis’ 49. Most of the British tank losses were inflicted on the newly arrived 8th Armoured Brigade from the 10th Armoured Division, which had used its armours too eagerly and was taught again the “normal lesson” of German all-arms “lethal” cooperation. Some modifications had occurred in the battle methods, but still, the main weapons the British used were artillery and air forces. The bombing operations contained 180 sorties with US Army Air Force bombers and during the four days’ battle 500 RAF aircrafts flew 2500 sorties in direct support of the land battle. The Germans were finally forced to retreat after facing the shortage of fuel.<sup>400</sup> Any request for permission to follow the retreating Axis was refused. The British seemed to have had finally

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<sup>398</sup> Jackson, p. 268; D’este, pp. 278 - 281.

<sup>399</sup> Jackson, pp. 269 – 272; Liddell Hart (1970), p. 290 – 291, 493; See also: Fuller (1948), pp. 234 – 235.

<sup>400</sup> Jackson, pp. 271 – 274.

learned the lesson to avoid the risk of being lured into German traps, as had happened so often before.<sup>401</sup>

The El Alamein was to become the decisive battle (see Appendix 5, figure 4), or more realistically a final punch, and Montgomery used plenty of time to guarantee the forthcoming success. A large deception plan was to mislead the Axis in believing that the main axis of advance directed through the southern parts of the theatre of operations just like during the battle of Alam Halfa. Naturally, the Axis had enough time to make their positions as impregnable as possible. About 500000 mines were laid in two major fields running north and south across the whole front. The vulnerability of Axis tanks to RAF attacks forced Rommel to break his armoured concentrations and to deploy his armour in six mixed Italo-German groups close behind the front line. Meanwhile, the battlefield equations had turned sharply in favour of the 8th Army. Montgomery was not contented with the standard of training of his troops and he even had doubts whether the troops would be able to do what he would demand from them.

According to Montgomery's memoirs, the operation plan was three-stage. Montgomery had realized that battles could not be won by trying to destroy the enemy's armoured but rather the unarmoured formations.<sup>402</sup> Technically, it was to be similar to Liddell Hart's Expanding Torrent, but definitely much more sluggish and rigid:

“First: the break-in. This was the battle of position... Second: the “dog-fight”... a hard and bloody killing match. During this we had so to cripple the enemy's strength that the final blow would cause the disintegration of his army. Third: the breakout. This was brought about by a terrific blow directed as a selected spot.”<sup>403</sup>

The frontal penetration of about six kilometres was to be made by the Commonwealth divisions. Two Armoured Brigades were booming the attack with their fire support. Other armoured units were prepared to pursuit after the infantry divisions had reached their objectives almost simultaneously. Montgomery estimated that there would not be any spectacular results in the beginning. However, Germans had lost totally their initiative since the battle of Alam Halfa. W. G. F. Jackson concluded that the battle of El Alamein was entirely a battle of resurrecting the ghost of Somme and Passchendaele, which had weakened British military determination in the first half of the First World War. Montgomery, being greatly influenced by his experiences of WW I, did not shrink so much from the casualties

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<sup>401</sup> Liddell Hart (1970), p.295.

<sup>402</sup> Liddell Hart (1950), pp. 277 – 277.

<sup>403</sup> Montgomery of Alamein, Memoirs, p.138. Quoted in McInnes, p. 29.

themselves, but was horrified that they had achieved anything permanent advance earlier. In addition, John Mearsheimer seemed to agree with Jackson.<sup>404</sup> Fuller had similar thoughts about the operation plan. To him it resembled the battles of 1916 – 1917, where only units of manpower and firepower were counted and long preliminary bombardments carried out.<sup>405</sup> The hopeless situation of the German side helped to carry out the plan. Rommel had received strict orders not to retreat though hopelessly outgunned and outnumbered.<sup>406</sup>

Seven weeks had passed before the British launched their offence. The operation opened with one of the most thunderous artillery barrages of the war on 24 October 1942. The pace of the offensive turned out to be very slow, even though the British started with 6 to 1 superiority in the armours. The British advantage of fighting power was even greater, since they had new Sherman and Grant –tanks arriving from America, while the Axis had to lean on more obsolete models. Originally, the operation was to be two-punch attack simultaneously from the north and the south. The armoured corps was to be used astride the enemy's supply routes. Later Montgomery concluded that the plan was too audacious.

The deep defensive positions of the Axis were not as easy to pierce as had been expected. The plan might have been unrealistic and the Axis positions too deep for a single night's attack. The "Break in" –phase lasted two days until the Commonwealth troops managed to break through two corridors. The advance of X Corps (*Corps de Chasse*) became very soon as a nightmare as the different Corps was mingled with each other in narrow attack corridors. Finally, after reaching the front line they met mines and anti-tank fire and suffered considerable loss of tanks during the next days. The commanders of armoured divisions were reluctant to lengthen the advance against the organized positions of the Axis. Their requests fell on determinedly deaf ears. Previous commanders would have flinched from giving such an order for fear of "repeating the unreasoning obstinacy of WW I commanders." Montgomery did not hesitate and the operation continued. The phase of "dog-fighting" was finally launched with the infantry divisions. Unfortunately, when the armoured brigades reached the frontline they were suddenly faced with a German counterattack. Finally, this phase lasted six days. It soon came evident that it lacked initial strength and was easily fended off. The last phase of "Break-out" was launched during the 2nd of November. The continuation of the operation turned soon to be an abattoir of tanks: as daylight increased and longer range, shooting became possible, the remaining German 88 millimetre anti-aircraft

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<sup>404</sup> Jackson, pp. 280 – 290; Mearsheimer p. 33.

<sup>405</sup> Fuller (1943), pp. 235 – 237.

<sup>406</sup> Liddell Hart (1950), p. 35.

guns caused heavy casualties to tanks moving in a methodical patterns. On one armoured brigade total of 70 out of 94 tanks were knocked out. At the same time, the strength of Axis dwindled even though there were no signs of German resistance slackening as yet.<sup>407</sup> Liddell Hart praises Montgomery for changing his initial plan after discovering that it had to be modified.<sup>408</sup>

The marvellous deception and cover plans were successfully in the early stages of the operation. The distractive pipelines and dummy petrol, food and ammunition dumps lured the Germans to expect the main attack to be directed from the south. Still, it is obvious that most of the surprise effect withered away after the first days of fighting in the northern area. Had the X Corps Armoured Brigades assault waves been faster, the achieved surprise had certainly been more decisive. Therefore, I disagree with Charles Cruickshank's allegation that deceptive measures really contributed significantly to the Eighth Army's famous victory.<sup>409</sup> Montgomery himself admitted that strategic surprise was difficult to obtain. However, tactical surprise was more likely to succeed. Instead of arguing that all the different decoys were trivial, I prefer to accentuate the minor value of any deceptive action produced by the Commonwealth troops after the first days at El Alamein. After the Axis located the true course of the Commonwealth, attack after few days the attack arrows met organized resistance and their speed was reduced significantly. This gave the Axis time to level their reserves with deliberation. Since the 8th Army had more tanks the German tanks were literally wiped out during these "attrition" battles, until the Afrika Korps had only 35 tanks left. British superiority over the German armoured vehicles had finally risen to a proportion of 20 to 1.<sup>410</sup> Rommel had no other alternative but to order the disengagement of his troops, which lacked sufficient transport abilities to do it properly. The battle of El Alamein was over when the fighting power of the Axis finally pined away. El Alamein cost the 8th Army over 13000 casualties and 500 tanks (total loss of which was only 150 as inoperative). The Axis casualties were about 20000 men and 400 tanks lost. The Axis also lost 40000 men as prisoners.<sup>411</sup>

The 8th Army tried to entrap the rest of Rommel's army with meagre results, in the problems of manding a growing number of prisoners prevented any attempts. Also bad weather,

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<sup>407</sup> Jackson, pp. 290 – 304.

<sup>408</sup> Liddell Hart (1970), p. 302.

<sup>409</sup> Cruickshank, Charles: Deception in World War II. Oxford University Press 1978, p. 28 33.

<sup>410</sup> Liddell Hart (1970), p. 304.

<sup>411</sup> D'este, p. 279.

insufficient training and lengthening supply lines from Egypt to Tunisia complicated the whole operation. The German forces managed to retreat successfully in high martial spirit and fit for combat, as the British advance was very cautious. Montgomery continued to stay operationally and logistically “on balance” at all times and avoided any risks.<sup>412</sup> Montgomery himself was disappointed in the performance of the *Corps de Chasse* during the battle of Alamein and its role as a pursuing unit.<sup>413</sup> Liddell Hart blamed the British operations of being repeatedly too cautious, too slow in motion and too narrow as a manoeuvres to had a change to cut German logistical connection and destroy Rommel’s entire army. The 8th Army was certainly not ready to accomplish any such “bold” manoeuvres. Henceforth, the Commonwealth troops were contented to verify the constant withdrawal of Axis troops after subtle pressurizing.<sup>414</sup>

Carlo D’Este appraises the battle of El Alamein as a model for air-ground cooperation on the modern battlefield.<sup>415</sup> I personally would be more cautious in making such generalizations despite the considerable role of close support given by the RAF and US Air Forces during the early days of the battle.<sup>416</sup> The inter-service cooperation was not as intensive as might be expected: the ground forces held the “inner ring” area while the air forces constantly bombed the “outer ring” areas. The air forces could operate freely and effectively because they were able to engage against all troops in areas of the outer ring. A more fluid and mobile operation would have caused more serious cooperational problems.<sup>417</sup> Thanks to this battle Montgomery’s star rose to one of the most successful and distinctive military leader of the twentieth century. W. G. F. Jackson pointed out that the most important feature in Montgomery’s leadership qualities was the ability to be even more headstrong than his subordinate commanders. The battle of El Alamein was more than mere a victory to British. The battle gave the British what they had been seeking since 1940: a battle-winning formula with a successful command team and command method, which inspired the whole Army. There soon grew up a large number of commander and staff officers who modelled themselves on his example and according to his methods.<sup>418</sup> Even more interesting was Montgomery’s urge to generalize his methods into a basis of the doctrine for the use of the

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<sup>412</sup> Jackson, p. 329.

<sup>413</sup> Hamilton, Nigel: *Monty. Master of the Battlefield 1942–1944*. Hamish Hamilton, London 1983, p. 15.

<sup>414</sup> Liddell Hart (1970), pp. 296, 305.

<sup>415</sup> D’este, pp. 278 – 29.

<sup>416</sup> Jackson, p. 293. During the second day of the battle, the RAF flew 1000 sorties and another 170 were flown by the U.S. Air Force.

<sup>417</sup> Liddell Hart (1970), pp. 296 – 297.

<sup>418</sup> Jackson, pp. 294, 304.



Army in England.<sup>419</sup> He wrote detailed lessons only six days after the breakthrough (Appendix 6). It is captivating to reflect these “maxims” to the theoretical discussions of the past decades. The problems and Fuller’s solutions in a break-in attack of Cambrai elaborated Liddell Hart’s theory of “expanding torrent”. It is to the credit to Montgomery that he actually implemented these ideas successfully. Simultaneously, he emphasized the traditional tactical British standpoints and the preference to firepower in lieu of manoeuvre.

#### 4.4 Operation Market-Garden – An Application of Indirect Approach?

“One does not plan and then try to make circumstances fit those plans. One tries to make plans fit the circumstances fit those plans.”

Major-General George S. Patton

The cross-Channel invasion of Normandy began late in the night of 5 June 1944. The Allied advance through the German line of defence was bloody, tough, considering the original plans of prompt advance also extremely slow.<sup>420</sup> The Allied forces aimed to pursue the German army in order to prevent the Germans from reorganizing their defence lines on the borders of the Reich. The Allied Supreme Commander, General Dwight D. Eisenhower, rejected Montgomery’s plan for a full-blooded thrust towards the Ruhr with his 21st Army Group and General Omar Bradley’s American 12th Army Group, a total of 40 divisions. Bradley had visioned the eastward thrust past the Saar to the south of Frankfurt. He wanted this to be the main thrust; this meant reducing the northward thrust of a secondary role. This naturally did not appeal to Montgomery. Montgomery succeeded in affirming the value of his northern direction to subdue the German resistance. Liddell Hart endorsed the “northern pursuit”, because, “he who holds northern Germany holds Germany”. Such a break-through of “Sherman’s march” would have torn in pieces the weak German front and ended the war. The German generals considered that the Allied forces were too widely spread to be effective enough. Because of the deficiency of the point of gravity, the plan could not function on the strategic level.<sup>421</sup> Avoiding any political level crisis about the matter, Eisenhower finally adopted the strategy of the attack within a broad front.

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<sup>419</sup> Hamilton, p. 46.

<sup>420</sup> D’Este, pp. 287 - 288.

<sup>421</sup> Liddell Hart (1970), pp. 563 – 564; Liddell Hart, B. H.: Have Armoured Forces A Future? In *Armor*, number 3, vol LX, May – June 1951. Virginia 1951, pp. 34–42, p. 39.

The true reason for the slowness of the “grand” operation in Western Europe was the increasing German resistance and lack of supplies. The British spearhead had to pause to refit, refuel and rest. This gave Germans time to reorganise their defensive measures in the Netherlands. The German 1st Parachute Army, amounted to about 18 000 men of multitude deficiencies, was hardly equivalent of one Allied division. Nevertheless, it fought with desperate courage.<sup>422</sup> Instead of a mere ground attack Montgomery launched an airborne attack code-named “Market” to capture the most important bridges in front of advancing ground force by airborne divisions. “Garden” was code-named to the ground forces, which consisted of the XXX Corps. Their task was to “blast down the main road” through the landing areas until they reached the final objective in Arnhem. This whole idea was the most daring and imaginative British (operational level) operation during the whole (Appendix 7). There were almost 5000 fighters, bombers, transports and more than 2500 gliders and an entire Allied airborne army involved in this operation, the greatest number ever used on a single airborne mission.<sup>423</sup> The operation was too slowly put into effect, because by mid-September the Germans had strenghtened their defence around the gap leading to the Ruhr, unfortunately precisely where Montgomery was planning a big thrust.<sup>424</sup> Even Martel was convinced of the true reason of the Allied failure. He added that the moment must be continual to keep the enemy paralysed and this was not possible because of the deficient petrol supply. During this pause the German recovered their morale and the opportunity for quick and decisive action was lost.<sup>425</sup>

Montgomery believed that this daring plan would collapse the morale of German troops, stifle they initiative and to cause the defeat of German during still during 1944.<sup>426</sup> Other three arguments were proposed by Montgomery to support the operation: outflank of the German defences in the Siegfried line, a strike would be directed on the least likely line from the enemy’s point of view, and finally the airborne troops would be operating in the most favourable conditions of range from home bases.<sup>427</sup> Perhaps obstinacy and the one-track mindness led to see Arnhem as an enticing doorstep to Germany, which it might have been without the unexpect resistance. Montgomery strove for a similar operation as launched in May 1940 when the German armoured spearhead broke through the Dutch front. Its chances

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<sup>422</sup> Liddell Hart (1970), pp. 559 - 560.

<sup>423</sup> Ryan, Cornelius: *A Bridge too Far*. Hamish Hamilton, London 1974, pp. vii, 136.

<sup>424</sup> Liddell Hart (1970), pp. 559 - 560.

<sup>425</sup> Martel, Giffard (1950b): *Modern Mobile War*. In *The Journal of Royal United Service Institution*, number 5, vol LIX, September - October 1950, p. 10.

<sup>426</sup> D’Este, p. 292; Ryan, p. vii.

<sup>427</sup> Montgomery, Field Marshal: *Normandy to the Baltic*. Arrows Books Limited, London 1961, p. 136.

of success depended on the effect of the airborne coup. Naturally, this time there was no originality in his plan, as the elements were familiar to both belligerent parties. The only surprise would be the actual use of similar methods, because the Germans would not expect to see such a bold manoeuvre from the British side.

Montgomery's first "punch" contained the XXX Corps of four divisions and a brigade. The other "punch" consisted of the attached 1st Allied Airborne Army and its eighteenth U.S. Airborne Corps with two airborne divisions and 1st British Airborne Corps with one airborne division and supporting units.<sup>428</sup> According to intelligence reports the only opposition was expected from the 1st Parachute Army with almost no transportation, armour or artillery. There were no significant enemy troops in the areas of Nijmegen or Arnhem. What remained unnoticed was the concentration of II German Armoured Corps with two badly mauled armoured divisions (10th "Fruntsberg" Division and 9th Hohenstaufen Division) in the areas of Nijmegen – Arnhem.<sup>429</sup> It had altogether just 10 000 men and about two dozen tanks. However, this considerable powerhouse to any lightly armoured airborne units began moving toward Arnhem during the early September.<sup>430</sup> Incidentally, Montgomery felt that the greatest hindrances would come more from terrain difficulties than from the Germans. The intelligence reports claimed that the German forces in the sphere of influence of the operation Market-Garden were "weak, demoralized and likely to collapse entirely if confronted with a large airborne attack." In addition, Montgomery desired to be able to reach the airborne units in the area of Arnhem in two days. The British airborne units were to hold the bridges for four days. Still, it has been said that the Deputy Commander of the 1st Allied Airborne Army, Lieutenant General F. Browning hinted to Montgomery: "Sir, I think we might be going a bridge too far".<sup>431</sup>

It is obvious that Montgomery had decided to gamble and this time the stakes were higher and more promptly achieved than those of the troublesome battles of North Africa during the late 1942. The plan to blast through the German resistance one narrow armoured thrust was certainly not "proper (British) armoured warfare", as mentioned by one of the armoured commanders in the spearhead of the breakout. It is obvious that the plan intended to be dissolve the discouraging memoirs of WW I trench warfare. This operation intended to

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<sup>428</sup> Ryan, p. xviii - ix. XXX Corps (British 50th Northumbrian Division, 43rd Wessex Division, 52nd Lowland Division, Guards Armoured Division and Dutch Princess Irene Brigade), eighteenth U.S. Airborne Corps (82nd U.S. Airborne Division and 101st U.S. Airborne Division) and 1st British Airborne Corps (1st Airborne Division and supporting units).

<sup>429</sup> Ryan, pp. 18 – 19, 23, 29 – 30.

<sup>430</sup> Ryan, pp. 18 – 19.

shorten the war and prevent the front lines from stabilizing again and, therefore, it suited perfectly the British way of thinking. Still, the plan was quite audacious from a man who earlier had been considered over-cautious and systematic. The operation was launched on 17th September. During the first two days the operation seemed to be going according to the plan. Actually, there was no hint that the battles around Arnhem would have become a miniature of the battles of Stalingrad. After chaotic and furious fighting, the British paratroopers managed to reach the Arnhem Bridge, but after twentieth September under constant and ardent German counterblows they were unable to retain it. The British, unable to reach the significant bridge, were besieged west of Arnhem. The Polish Parachute Brigade, jumping as they did straight into carnage near Arnhem, suffered a more dramatic fate.<sup>432</sup>

The XXX Corps had serious difficulties in contacting the parachute drop zones along their route of march. 20000 vehicles were expected to pass through the Netherlands to Arnhem within 60 hours. The entire XXX Corps armoured column was to be fed up the main road with two vehicles abreast. Unfortunately, the advantage was badly snarled up in traffic jams, because the German resistance was more furious than expected along the few advancing roads. The unexpected reinforcements of tank battalion to German II Armoured Corps caused the final obstruction between Nijmegen and Arnhem. The schedule could not be maintained, but finally after four days and eighteen hours a modest link-up was finally stretched to the surrounded British paratroopers.<sup>433</sup>

The commander of the 1st British Airborne Division, Major-General Robert Urquhart, was finally ordered to launch an evacuation to the safer side of the lower Rhine at 26th of September. Only 2400 Polish and British paratroopers were saved from a total of 10000 men. Also Germans suffered heavy losses. Montgomery considered his operation to be ninety per cent successful. He had crossed four major water obstacles including the Maas and the Waal. The outcome may be a question of interpretation and the geographical aim was almost reached, but still the original aim of establishing a bridgehead north of the Rhine remained unattainable. This failure led to a military stalemate for several months.<sup>434</sup>

Regardless of the regrettable outcome of the plan, it features prominently in considering the British ability to apply military thought. I consider that there are remarkable similarities to the

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<sup>431</sup> D'Este, pp. 292 - 293; Ryan, pp. vi, 107 - 112.

<sup>432</sup> Ryan, pp. 233, 297, 377 - 378, 387.

<sup>433</sup> D'Este, pp. 292 - 293; Ryan, pp. 115, 380, 389; Montgomery, p. 149.

<sup>434</sup> D'Este, pp. 292 - 293; Ryan, p. 387, 450, 457; Montgomery, p. 149.

adherence to the strategy of indirect approach, as Montgomery aspired to reach a strategic level result by operational level attack. Tactically, the airborne operations and the XXX Corps ground attack approached the adversary directly. Hence, it is not fruitful to focus on singular airborne operations. Montgomery tried to make the whole German northern front and by chain reaction the whole German resistance collapse. Actually, there were clear signs that Montgomery tried to combine surprise, deep manoeuvre into the enemy rear and (operational level) psychological dislocation. Fuller appraised the operation of the lack of the third service, navy. Had a supporting amphibious force been sent to the German rear areas, they would have been found themselves in a quandary concerning the use of their few reserves.<sup>435</sup> Unfortunately, this time the odds did not favour Montgomery's attempt. D'Este reminds that the operation Market-Garden was not the last airborne operation: later two parachute divisions and gliders were used during operation Plunder, launched on 23 March 1945. The Rhine was breached at numerous points and by the end of March 300 000 enemy troops were trapped in the rapidly closing Ruhr pocket.<sup>436</sup>

#### 4.5 The Features of the British Fashion of War During the Second World War

“We would have had very little advantage over French and British even with our up to date tank and air arms, if these arms had not been matched by equally up-to-date organisation, training and tactical doctrine”

Field Marshal Erwin Rommel

Liddell Hart evaluated that the doctrine of “a pitched battles” hindered the soldiers from realising that the new mobility had offered the means to fulfill the true aims of strategy without a serious fight.<sup>437</sup> In addition, sticking to tactical level ideas created courses of actions where “operational” or strategic level aims were neglected. This axiom is more or less familiar to the ideas and writings of Henry Lloyd, who was fretting about the aimless war plans of his contemporaries, just like Liddell Hart and Fuller after less than one and a half centuries. In *The Political and Military Rhapsody* (1792), he wrote:

“Hence it is that our victories are never complete and decisive, and that our attacks are reduced to some particular points, which, gained or lost, the battle is over: the enemy retires, generally in good order, because from the extend and slowness of our motions we cannot pursue him with any vigour; he occupies some neighbouring hill and we have to begin again.”<sup>438</sup>

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<sup>435</sup> Fuller (1948), pp. 344 - 345.

<sup>436</sup> D'Este, p. 296.

<sup>437</sup> Liddell Hart (1950), pp. 275 – 276.

<sup>438</sup> Lloyd (1792), pp. 73 - 74.

Therefore, the policy of directing the British tanks to seek out and destroy the enemy's tanks distorted the whole picture of gaining higher level results. It seems that Liddell Hart was pleased with the praise he received but simultaneously he criticized the British Army's methods and ideology of implementing different battlefield levels and their too narrow approach to tactical level skirmishes. The standard British applications of "indirect approach" were basically tactical or limited manoeuvres at lower levels, which had incidentally played a part in "positional warfare" earlier. German troops found themselves, outnumbered, outgunned and unable to respond by any efficient counterblows. Therefore there is much truth in General Archibald Percival Wavell's words: "it was in fact an improvisation after the British fashion of war rather than a setpiece in the German manner."<sup>439</sup> I much agree with Brian Holden Reid's discovery of the British Army's anathema of any doctrines above the tactical level. The British Army seemed to rely on pragmatic solutions to encounter military challenges and accept each challenge as it came in order to find solutions based on the experience of its commanders.<sup>440</sup>

Fuller did not pay attention to the reducing impact of the tank attack in moral meanings, though after the novelty of tanks wore off, they became as a normal part of the battlefied image. Fuller's shock effect was carried out both by the sudden appearance of tanks and even more discernible by the firepower, which was the original purpose in the process of tank development. I like to point out, that this particular feature in Fuller's methods is nowadays linked too hastily to disparage concept of attrition and therefore it is not usually connected under a common denominator. The element of firepower is naturally important feature in modern ideas of manoeuvre warfare, although it provides only a part of the setting for the genuine success. Fuller reasoned that in armoured warfare the tactical aim was the destruction of the enemy's armour. Therefore, in order to bring the enemy armour to battle, it was "necessary to attack an objective which is of such importance that the enemy must protect it."<sup>441</sup> Actually, Montgomery came very close to implementing these ideas during his North Africa campaigns.

The account given by A. Behagg may include some collecting ideas. He emphasized the importance of the decision making cycle as a decisive step to victory and superiority tactics. Neither the French, nor the British Army were able to cope with the demands of manoeuvre

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<sup>439</sup> Wavell: Despatches 10 July 1946, p. 3530. Quoted in Jackson, p. 47.

<sup>440</sup> Reid (1989), p. 10.

<sup>441</sup> Fuller (1948), p. 164.

warfare as practised by their adversary until they overrun German military power mainly with their immense quantitative military capacity. The further application is a matter of closer inspection. While A. Behagg claimed that the deeper the enemy penetrates, the greater the tendency would be for the defender to become paralysed, he might have evaluated the importance of this act too high. His accusations were based on the situation faced by French and British troops during the summer of 1940.<sup>442</sup> This operation launched by the Germans had a clear aim, which is why it was a classroom example of a strategic level indirect approach, favoured by Liddell Hart. In addition, as at least Lloyd, Jomini and Liddell Hart all pointed out, every single battle has to serve the final objective. Therefore, superior tempo should be considered only as an essential tool in achieving the final objective. Naturally, superior tempo is not a solution itself.

Regardless of Liddell Hart's strategic perceptions, he either failed to see or did not have the nerve to mention the handicapped ability of British Tank Brigades to implement strategic level aims, which he had praised during the 1930s. Deep (operational level) penetrations would have been possible in WW I battlefield conditions. During WW II any such operation was totally outdated, where front lines were constantly undulating. Harold Winton suggests that the British mechanisation process in Britain stressed too much the supporting role of armoured vehicles to conduct of a tactical "break-in", in the fashion of World War I. Any uses of armoured forces as an operational instrument was neglected.<sup>443</sup> I would consider the forming of self-contained brigade-sized groups as probably the first sign of the process going astray. Though efficient, the Tank Brigade and its tactical drills was an unbalanced fighting instrument without the support of other branches. This process unfortunately failed to adhere to the vision of George Lindsay of a balanced, self-contained armoured division, capable of deep penetrations. It is obvious that Tank Brigades and incidentally the whole organisation of the Mobile Division lacked the capacity of fulfilling the demands of operational instrument. I would say that this is one of the most important idiosyncracies of the British Way in Warfare during WW II. I am not arguing that Brigadier C. Broad's booklet "Mechanised and Armoured Formations" was unsuitable for WW II battle condition; on the contrary, it laid firm foundations of tactical level armoured fighting.

The preference for emphasising tactical level firepower in lieu of movement become more obvious since the Battle of El Alamein as well demonstrated in Montgomery's main lessons

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<sup>442</sup> Behagg A.: Increasing Tempo on the Modern Battlefield. In *The Science of War. Back to First Principles*. Padstow 1993, p. 113.

<sup>443</sup> Winton, p. 2.

from the Battle of El Alamein (Appendix 6), even though operation Market-Garden demonstrated a bold and ambitious operational level application. I would compare operation Market-Garden to the German operation resulting in the collapse of France in 1940. The thrust of German armoured divisions separated them from the French from their logistics. However, the risk taken hastened the quick collapse of Allied resistance. This plan demonstrated the British ability to exploit the ideas of Liddell Hart's indirect approach, of trying to influence similarly the psychological and military dislocation and *matériel* output. The aim was at any rate attainable in proportion to the resources given. However, in the physical sphere the one constant factor is that means and conditions are invariable inconstant.<sup>444</sup> It was perhaps, the lack of originality and sufficient flexibility that enabled them to produce something beyond defender imagination.

The battles in the peninsula of Cyrenaica from the late 1940s until the early 1941 (Appendix 5, figure 1) showed tinges of tactical applications of manoeuvre warfare, where the movement of armoured forces sealed the fate of Italian troops before the actual attrition phase. According to Liddell Hart, at least the first phase of the British operation in North Africa referred to the ideas of tactical indirect approach. The enemy was taken from behind as any frontal assaults would probably have failed because of the Italian minefields.<sup>445</sup> As early as 1942, Major-General Eric Dorman-Smith, Deputy Chief of the General Staff, in the Middle East in 1942, estimated that the influence of Liddell Hart's ideas of indirect approach on the tactical and strategic ideas of the British Army was considerable. He also estimated Rommel's operation during the battle of Alam Halfa as a "masterly exploitation of the principle of indirect approach". The lack of all-arms and also inter-service cooperation prevented the development of sufficient tactical and battle technique methods against Germans, though there were some innovative inspirations in the organisational development until the campaign of Alam Halfa. It is axiomatic that the battle of El Alamein signified a return of the methodical battle.

The experiments of mechanised vehicles in Egypt were certainly invaluable to the desert battles of WW II. Regardless of these experiences rigid and intolerant approach to cooperation between branches, characteristic feature of the British Army units, prevented them from being flexible enough to adjust the established and itemized battle technique patterns to the changed battlefield conditions. The Germans mostly subjugated the tactical and operational level operations making the combined effect of German tank and anti-tank guns incomparable. Manoeuvre exercises in Salisbury Plain had clearly elaborated the tactical

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<sup>444</sup> Liddell Hart (1929), p. 3.

<sup>445</sup> Liddell Hart (1970), p. 113.



skills of British armoured units, though collaboration between branches was shaky. That is why General Claude Auchinleck, the CINC of the British forces in the Middle East, bluntly declared: “our armoured forces are tactically incapable of meeting the enemy in the open, even when superior to him in number.”<sup>446</sup>

It is apparent that British doctrines were more based on the methodical ideas of warfare. Any bold action had to be reconsidered several times to minimize any risks taken. Sticking to the mere tactical spheres of war during the peacetime naturally prevented and more ambitious manoeuvres. In addition, the need of standard interservice doctrines to obtain any agreement prevented efficiently all flexible cooperation. The “casting” between services had its roots in the interwar period, as discussed in the previous chapter. Unfortunately, no more serious measure to bring the services more closely to each other took place until during the Cold War period. Besides, the lack of sufficient flexibility prevented any new applications of tactics. This feature is perhaps the most limiting factor in adapting any new tactical or operational innovations.

According to Charles Messenger, even the Americans were prepared to form at least 50 armoured divisions in order to win the war. The role of infantry was considered merely in the role of auxiliary arm to assist tanks through obstacles. American armoured divisions were organised mainly after 1942. The 1942 organisation is presented in Appendix 3 (figure 8). The basic idea is much the same as in the British organisation. One fundamental difference exists in the command and control structure. The U.S. Army division contained two similar brigade headquarters as a tactical Combat Command headquarters to add flexibility in command. As the tactical situation changed so did the numbers of units under each Combat Command. During the 1943, the amount of tank battalions was reduced to three. This reorganisation resulted that 60 tank battalions were allocated for infantry support, while only 50 were retained in the armoured divisions.<sup>447</sup>

## 5 THE NUCLEAR ERA AND THE CHALLENGES OF THE NATO DEFENCE

“The regular officer has the tradition of forty generations of serving soldiers behind him, and to him the old weapons are the most honoured. We had seldom to concern ourselves with what our men did, but much with what they thought, and to us the diathetic was more than half command.”

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<sup>446</sup> Winton, p. 155.

<sup>447</sup> Messenger, pp. 222 – 223; See also: Dyster, p.357.

There were striking differences between the political and military situations of 1918 and 1945. The British were not as “impoverished psychologically” as they had been in 1919. Standing alone from 1940 to 1941 and bearing the brunt of fighting against the Germans, Italians and Japanese had made them immensely proud of their achievement. Hence, three pillars were re-established. Firstly, the defence of Western Europe, secondly, the defence of sea communications and finally the firm hold on the Middle East as the crossroads of the Empire and the main source of oil supplies.<sup>448</sup> Britain shifted its military efforts from the conventional to the nuclear component during the 1950s, as a result of the NATO commitment, which placed exerted pressure on her continental allies to contribute to the conventional shield.<sup>449</sup> By 1949 British military theorists finally recognised the necessity of basing the Continental strategy on “atomic deterrence”. Unlike the first post-war years, the fifties provided some significant theories of military affairs, including the theories on the causes of war, the classification of wars and theories of deterrence and local and limited war.<sup>450</sup>

As Supreme Allied Commander in Europe, General Dwight Eisenhower proposed 96 divisions and 9000 aircrafts for the conventional defence of NATO’s Central Region. NATO ministers rejected these requirements forthright as politically infeasible and economically unaffordable in 1952.<sup>451</sup> The Services lacked a definite common concept of the future major war. New weapons and systems were created, but the subsequent course of the conduct of war was seen as too difficult to predict.<sup>452</sup> Liddell Hart asserted that “the atomic bomb promises to speed up the pace of destruction, and make it more horrifying, but that does not assure a swift ending of the struggle”.<sup>453</sup> Three commitments involved active service of the British Army during the first half of 1950: Korea, Malaya and Kenya. Simultaneously, Britain felt obliged to offer seven divisions to European defence as a member of the North Atlantic Treaty Organisation (NATO) since 1949.<sup>454</sup> Britain and France needed large conscription and

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<sup>448</sup> Jackson, William and Bramall, Dwin: *The Chiefs. The Story of the United Kingdom Chiefs of Staff*. B.P.C.C: Wheatons Ltd., Brassay’s 1992, pp. 270 - 271.

<sup>449</sup> Linder(1981), p. 123.

<sup>450</sup> Linder (1981), p. 1.

<sup>451</sup> Reid (1989), p. 1; Simpkin (1986), p. vii.

<sup>452</sup> Linder, Julian: *British Military Thought After World War II*. The Swedish institute of international affairs. Gower Publishing Company Limited 1985, p. 277.

<sup>453</sup> Liddell Hart, B. H.: “The Shadow of War with Russia”, 1959, p. 144. Quoted in Linder (1985), p. 277.

<sup>454</sup> Farrar-Hockley, Anthony: *The Post-War Army 1945 - 1963*. In *The Oxford History of the British Army*. Oxford University Press 1996, p. 333.

recruitment-based armies and air transport to be able to maintain their Empires – and their authority.<sup>455</sup>

The American nuclear weapon policy of massive retaliation led to the negation of the probability of fighting a large-scale conventional battle and diminished the value of a strong conventional component of the shield forces. It was decided to introduce American tactical nuclear weapons in the initial stage of war in the operations on the Continent. This led to the modernisation of the organisation and equipment of the British Army of the Rhein (BAOR).<sup>456</sup> The dependence on nuclear weapons became even more obvious after the adoption of the “New Look” in 1954. German rearmament would take place as a part of a European conventional force. This led to ideas of “forward defence” and requirements of early invocations of nuclear defence.<sup>457</sup> Ground forces were to be substituted for the nuclear bias as a basic structure of NATO forces. Britain’s grand strategic doctrine was therefore ultimately based on the NATO assumption that defence in the traditional sense in Europe was impossible, and nuclear deterrence was the only way of preventing the distraction of Britain and the Continent.<sup>458</sup> Nonetheless, the accentuated role of nuclear weapons to Western strategic thinking widened a vacuum between the strategic and tactical levels of war. Fuller and Liddell Hart were among the first to point towards this direction in the early 1950s. They were increasingly preoccupied with grand strategic issues and less with the conduct of battles and campaigns.<sup>459</sup>

The Korean War began in June 1950. British formations were sent under the command of United Nations multinational force. Unfortunately, the British Army faced again the same problems as in 1940 to 1941: ill-equipped forces and neglected training. Of the two brigades sent to the conflict, two-thirds of the junior ranks were national servicemen, some of who had just arrived from recruits training. During the hostilities, one brigade was rapidly engaged in an intensive battle involving three enemy divisions, in which it suffered considerable loss. With few exceptions, operations were conducted with the weapons and equipment used in the Second World War. The dominantly mountainous country did not favor armoured battles and the doctrine used during the battles was more or less based on the experiences faced during

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<sup>455</sup> Carver (1990), pp. 779, 781.

<sup>456</sup> Lider (1985), p. 292.

<sup>457</sup> Freedman, Lawrence: The First Generations of Nuclear Strategists. In *Makers of Modern Strategy. From Machiavelli to the Nuclear Age*. Edited by Peter Paret. Clarendon Press, Oxford 1990, p. 744.

<sup>458</sup> Lider(1981), p. 123.

<sup>459</sup> Reid (1989), pp. 2 - 3.

the bloody battles in Italia during 1944.<sup>460</sup> Korea was one of the most important reasons why all the major powers at this time reconsidered their preparations for conventional warfare.

Lieutenant-General Sir Giffard Martel described the current situation in 1950 as a repetition of the post WW I attitude, where the British Army suffered serious setbacks after a war and the rapid modernization progress had come to a sudden end.<sup>461</sup> Similar thoughts were put forward by Liddell Hart. The striking head of the division was too weak to be able to deliver a decisive blow in the sudden concentration of a mass of tanks at a weak spot. This was the idea of German *Schwerpunkt*, or saturation tactics used during the two German break-throughs at Sedan and at Aisne in 1940, where less than 1000 tanks were concentrated on a front less than 25 kilometres. The method appealed to Liddell Hart and he suggested that this should be the principle of future armoured strikes. Therefore, the number of tanks in the armoured formation was not to be reduced but increased.<sup>462</sup> The tendency of cutting the number of administrative vehicles was due to the aim of more flexible organisations, but also to the need of reducing the risk of ending up as the target of an atomic assault. In addition, Major General H. E. Pyman, commander of the 11th Armoured Division, even suggested that the amount of ammunition carried by the armoured division should be reduced dramatically, because the accuracy of modern tanks had improved since the days of WW II.<sup>463</sup>

Not until the mid-1950s did the British finally conclude that their resources were sufficient for only four divisions. The BAOR was organised to one corps. With the support of the United States, the lion's share of recondition of these forces, including artillery with nuclear warheads, was rapidly brought to conclusion.<sup>464</sup> These divisions had obvious shortcomings. The infantry was mainly carried in a simple truck. The size of the division had grown to huge proportions, including a large logistics "tail".<sup>465</sup> The strategy of a retreat from Europe followed by a general counteroffensive was discovered impossible, because of the threat of an atomic attack into ports and airfields. As a result, the British Army had to be held in a higher state of readiness.<sup>466</sup> The Anglo-American special relationship is in itself a captivating myth. Certainly when Britain refused to cooperate – in Vietnam in 1965 and in Grenada in 1983 –

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<sup>460</sup> Farrar-Hockley, pp.318 – 332; See also: Dyster, pp. 404 – 405, and Carver (1990), p. 780.

<sup>461</sup> Martel, Giffard: The Land Aspect in the Trench Gascoigne Prize Essay, 1949. In the in The Journal of Royal United Service Institution, number 578, vol XCV. May 1950, p. 224.

<sup>462</sup> Liddell Hart (1951), pp. 40 - 41.

<sup>463</sup> Pyman, H. E.: Armour in the Land Battle. In The Journal of Royal United Service Institution, number 594, vol XCIX. May 1954, p. 225.

<sup>464</sup> Farrar-Hockley, p. 337.

<sup>465</sup> Dyster, pp. 375 – 376.

there were crises in the special relationship. When Britain was involved in its own campaigns without the support of the United States, there have been critical outcomes like when British troops were withdrawn from the Suez area in 1956. The 1982 Falklands campaign succeeded in part because of American supplies to the task force. Even the military cooperation between the British Army and the U.S. Army there had been occasions of disagreement and disappointment. The unhappy incident when the British 29. Brigade fought under American command during the Korean War, and attempted to hold a hopeless position in the face of a Chinese offensive is one example. Despite having been left isolated and without proper support, they did in fact succeed in slowing down the offensive, but at the cost of 1,000 casualties (a quarter of the British front-line strength). Consequently, there have been suspicions concerning the commitment of an independent national brigade in a major war.<sup>467</sup>

The strategy of flexible response was adopted in NATO in 1967, although it was basically a form of words rather than a carefully worked-out plan of action. The idea arose on the basis of the recent experiences gained in Korea, Indochina, Malaya and Kenya. However, the “Imperial policing” tasks were quite different in their nature to the British Army and therefore no common doctrinal debates were needed.<sup>468</sup> The British tradition of persistence and adaptability seemed to gain some foothold in the post-war military thought. The era of her traditional role as a centre of a worldwide Empire was over. Similarly, her conventional military force ceased to be an instrument in this game.<sup>469</sup> It was a significant step toward conventional defence, since the first attempt to stop the Soviet attack was made by conventional troops. Should that fail, the next step would be the use of tactical nuclear weapons. If this did not produce a satisfactory result, the strategic nuclear arsenal would be used. Some problems occurred when the Europeans tried to convince the Americans that a feasible conventional option was readily available.<sup>470</sup>

The forward defence as one part of this concept came under sharp criticism during the early 1970s. The air power and extensive mechanisation of the Warsaw Pact rendered the whole idea of NATO’s thin defence line obsolete. The peacetime bases of the first-line troops were so far away from the wartime positions that getting there fast enough was in no way guaranteed.<sup>471</sup>

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<sup>466</sup> McInnes, p. 7.

<sup>467</sup> Freedman (1997).

<sup>468</sup> Lider (1985), p. 292.

<sup>469</sup> Lider (1981), p. 127.

<sup>470</sup> Freedman (1990), pp. 771 – 772.

<sup>471</sup> Salminen, Pertti: *The Impact of Arms Technology on Military Doctrines*. Finnish Defence Studies 5, War College, Helsinki 1992, p. 36.

Little was done to improve any disadvantageous disproportion in comparison to the Russians, because American attention became more fixed on the rapidly escalating guerilla war in Vietnam. Several years after the war, the American preparations for conventional war scenarios lied in “suspended animation”. Therefore, the preparations in Europe were being neglected. Notable amounts of troops were withdrawn, including parts of mechanized and armoured troops.<sup>472</sup> There was therefore little chance that other NATO countries would spend more resources on ground forces. The reliance on tactical nuclear weapons remained strong in NATO’s European defence.<sup>473</sup>

The Vietnam War swallowed up the technological, budgetary and human resources from the development of American armoured forces for the European theatre. Still, it provided some significant experiments in the use of helicopters in combat and in other purposes as well. The tactical advantages of handling this vehicle of new dimensions proved to be much more useful than expected for later methodical thoughts of the modern battlefield. Of course, Vietnam did not prepare the American forces for the European theatre of the tank – antitank scenarios, nor had any sophisticated armoured warfare ideas been produced.<sup>474</sup> The gradual retreat from the Empire and policing the Empire in the end of the 1960s decreased the British worldwide military role.<sup>475</sup> Like in the 1940s and in the early 1950s, the British defence did not commence from the banks of Rhine, but was based mainly on air offensives against the opponent, the maintenance of sea lines of communication and finally the defence of Middle East.<sup>476</sup> The overall shift of British security policy towards Europe resulted from the primary role of the BAOR, which grew relatively, but not absolutely. Its position in Europe was very important for Britain’s position in the world, because Europe remained a centre of economic, military, and cultural power. A prominent place in the European system meant prominence in the world structure.<sup>477</sup>

Perhaps the most important modification of the British Army military thought was fulfilled after the declaration of the American new FM 100-5 in 1976. This doctrine had recognized the lethality of modern weaponry, and the last experiments from the modern battlefield, the impact of war in the Middle East in 1973, were considered essential. The doctrine established itself as a ready point of departure for tactical discussion. The new doctrinal bible, comprising

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<sup>472</sup> Dyster, pp. 428 - 432.

<sup>473</sup> Freedman (1990), p. 772.

<sup>474</sup> Dyster, p. 429.

<sup>475</sup> Lider (1985), p. 292.

<sup>476</sup> McInnes, p. 6.

of a distinctly new vision of tactical warfare, was both symbol and substance of the Army's reorientation from Vietnam back to Europe.<sup>478</sup> Almost two postwar decades of British military thought were concerned with the tactical experiments achieved from military engagements overseas rather than with higher level guidelines to establish the British military future. The traditional British tendency to handle each conflict separately and the constant resistance to any radical changes were officially explained in terms of "pragmatic anti-Communism".<sup>479</sup> The only worldwide commitments to be retained were Belize, the Falklands, Gibraltar, Hong Kong and Cyprus.<sup>480</sup>

### 5.1 The Final Form of Liddell Hart's Ideas

"While fighting is a most practical test of theory, it is a small part of soldering and there is far more in soldering that tends to make men the slaves of a theory."

B. H. Liddell Hart, 1944.

Between 1940 and his death in 1970 Liddell Hart produced hundreds of articles, wrote 13 books including major histories of the First and Second World Wars and his memoirs in two volumes, gave numerous interviews, broadcasts, and lectures. His contribution to British interwar period military thought had been significant since his appreciation rose significantly during 1960s. He received plenty of recognitions and honours – even knighthood in 1966.<sup>481</sup> After WW II, Liddell Hart had found himself drifting with the tide of nuclear ideas. New dimensions of global war and global strategy seemed to fascinate him. The limited view of the interwar period was replaced with the awareness of the whole world. The extended range of aircraft and other military munitions and armament systems gave almost unbounded latitude to military and political affairs.<sup>482</sup> I agree with Brian Bond's thoughts about the perceptible difficulties of reconciling his two basic tenets: the strategy of indirect approach with the idea of paralysing the enemy's will to fight and the need to limit the campaigns almost to the utmost.<sup>483</sup>

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<sup>477</sup> Lider (1985), p. 472, 476.

<sup>478</sup> Army 86. Force Design, Chapter 6, Doctrinal Renaissance [referred to 15.04.2002]. Available at <URL: <http://tradoc.monroe.army.mil/historian/pubs/TRADOC25/contents.htm>.

<sup>479</sup> Lider (1985), p. 445.

<sup>480</sup> McInnes, pp. 4, 16, 19.

<sup>481</sup> Bond (1977), p. 273.

<sup>482</sup> Liddell Hart (1950), pp. 104 – 108.

Liddell Hart had condemned the continental “perversion” of throwing together mass armies.<sup>484</sup> The policy of limited liability to Continental defence seemed to have successors also in the debate concerning NATO defence. It was feared that in front of an evident crisis situation, not all NATO governments might decide that the situation at hand justified a general mobilization.<sup>485</sup> Actually, the process of declining the mass armies and the transformation of European military establishment to smaller professional armies had started up since the early Cold War period.<sup>486</sup> Obviously, Liddell Hart tried restore mobility to battlefield by his ideas of small and mobile armies. It was an idealisation of the eighteenth century battlefield conditions with smaller armies when large-scale manoeuvres had been a very important element in warfare. Movements of manoeuvre were used for striking at the opponent’s exposed flanks. With the mass armies of WW I, the open and exposed flanks ceased to exist and manoeuvre ideas were replaced by the costly strategy of attrition. There seemed to be general agreement on the usability of tanks, but there was disagreement as to what role it should have. For Liddell Hart and Fuller, mechanisation had been for decades a way to professional armies with an increased capacity to dominate battle conditions.

In addition, Liddell Hart repeated again in the late 1940s that the future British Army should be based on high quality armoured and airmobile divisions. The concept of a conscription army was not practical, because it would be altogether too slow to mobilize in future wars. Liddell Hart trumpeted the fallacy of a conscript based army for lacking suitable professional skills in modern battlefields and on the other hand undermining the professional skills of regular-based troops to unessential recruit training. Neither atomic weapons nor the American reinforcements would form a solution to this problem. The army that still depended on rail and road would undeniably be outmanoeuvred by an adversary capable of moving across the country and even swimming across rivers instead of crossing by bridges. The *élite* professional army was the ultimate solution for the British and for Continental countries too.<sup>487</sup>

Fuller was convinced as early as in 1946 that the conventional power will experience serious reductions from the present-day level, because in the atomic battles the need of fighting man power is clearly minimal. His vision of the future was quite gloomy: “The soldier will retire

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<sup>483</sup> Bond (1977), pp. 167 - 168.

<sup>484</sup> Freedman (1997).

<sup>485</sup> Dyster, p. 453.

<sup>486</sup> Haltiner, Karl: The Definite End of the Mass Army in Western Europe? In *Armed Forces & Society*, number 1, volume 25. Fall 1998. Transaction Periodicals Consortium – Rutgers University, pp. 8 – 9.

<sup>487</sup> Liddell Hart (1950), pp. 94 – 95, 188; see also: Liddell Hart (1946), p. 89.



from the contest to become the fearful spectator of a war fought between fearless robots”. An even more melancholic approach is presented concerning to the value of strategy, command, leadership and discipline, the moral and physical paraphernalia of war. These elements would mark only one percent to the other ninety-nine, which were based on the high superiority of weapons.<sup>488</sup> I am convinced that these ideas reveal Fuller’s true attitude towards the importance of the technical characteristic of war, even though Hoffman Nickerson seemed to be convinced that “Fuller would be the last to claim that superior armament alone must guarantee victory.”<sup>489</sup> Fuller neglected the other than technological elements of the battlefield, which is not at all a surprising attitude. I would allege that Fuller’s fondness for prioritising the latest scientific innovations was flagrantly brought up since the end of WW I, when he alleged that a tank was the latest innovation of the western industrial triumph. What is surprising was his over-emphasis of the effect of any technical apparatus versus other elements in the art of war. It seems that he took the tanks and nuclear weapons as irresistible elements in the battlefield that would cause the paralyzing effect. Therefore the tank and the nuclear weapons would be valuable only because of their quantitative and destructive powers, as their selective use to achieve any psychological dislocations would be quite another matter.

In addition, the interaction within the concept of Liddell Hart’s indirect approach is not easy to crystallize in words, as it contained both physical and non-physical elements. Liddell Hart did not value any arithmetical proportions, but considered the moral and physical factors to be inseparable and indivisible. As he put it, “the saying gains its immortal value because it expresses the idea of the predominance of moral factors in all military decision.” Morale is the only constant factor, whereas the “physical factors are fundamentally different in almost every war and every situation”. Naturally, human nature varies in its reaction to danger. The resistance men will offer in different situation has to do with the situation faced: if taken by surprise or alerted, if they are weary and hungry or fresh and well fed. Thus, the “broader the psychological survey the better foundation it affords for deductions”.<sup>490</sup>

Liddell Hart’s final form of the theory of indirect approach was not based on the ideas of “the-Man-in-the-Dark” or “expanding torrent”, but on strategic and especially grand strategic studies. The value of “Sherman’s march” rose substantially during the post-war years,

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<sup>488</sup> Fuller, J. F. C.: The Age of Annihilation. The Atomic Bomb and Warfare of the Future. In The Journal of Army Ordinance, number 154, vol XXX, January – February 1946. Washington 1946, p. 35.

<sup>489</sup> Nickerson, Hoffman: Limitless War? A Review or Fuller’s “Armament and History”. In The Journal of Army Ordinance, number 155, vol XXX, March – April 1946. Washington 1946, p. 207.

<sup>490</sup> Liddell Hart (1929), pp. 2 - 4.

because the Germans had implemented the same idea in modern battlefield.<sup>491</sup> Liddell Hart realized that the main question was not about the initial break-in or breakthrough operation, but about a deep penetration of armoured forces and its derivative results to the moral of the adversary's troops. In addition, as he perceived the superiority of the indirect over the direct approach, he was looking merely for light on strategy. After WW II he realized that the indirect approach had a much wider application – that it was a law of life in all spheres, a sort of philosophical truth, which should also be as a guiding principle to the function of military organisations.

In addition, Liddell Hart estimated the actual psychological dislocation to take place before the actual clash or fighting took place. As strategy was an application of grand strategy on a lower level, the role of the movement or the manoeuvre of armed forces was not the essential part, but the actual and intended effect to achieve higher-level aims. This would be accomplished by the most effective indirect approach to lure or startle the opponent into a false move. Therefore, the enemy's own energy should be turned into the lever of his overthrow. The main purpose of strategy was not to diminish the possibility of resistance, because it sought to fulfil this purpose by exploiting the elements of movement and surprise. Movement generates surprise and surprise gives impetus to movement. In addition, surprise lies in the psychological sphere and depends on a calculation, which is the best goal to affect the will of the opponent.<sup>492</sup>

The main idea of the indirect approach – the aim of war – is to weaken resistance before attempting to overcome it. This was valuable from tactical to grand strategic level as well. In history the indirect approach was usually physical, but always psychological. Liddell Hart concluded that any direct approach to one's mental or physical objective tended to produce a negative result. This deduction differs from his previous thoughts, because he had emphasized the impact of a direct approach to mental objects and neglected any physical objectives. The true ability of armies depended more on control, morale and the supply of armed forces, and any measures to influence these factors were of crucial importance. The actual impact of "Sherman's march" was not merely the psychological dislocation of armed forces, but more profoundly the imposed strain on the will of the soldiers from their families. This made the two loyalties (country and family) in opposition to one. Therefore, the indirect approach to the

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<sup>491</sup> Liddell Hart (1951), p. 42.

<sup>492</sup> Liddell Hart (1954), pp. 163, 336 - 337.

enemy's economic and moral rear had proved as decisive in the ultimate phase as it had been in the successive steps in France during the summer of 1940.<sup>493</sup>

It has been generalized lately that Liddell Hart's ideas of diminishing the enemy resistance by destroying or disrupting the enemy rear forces. It is obvious that Liddell Hart had no long-range rocket artillery or air-delivered standoff weapons in mind. The element of firepower would be sufficiently fulfilled by these measures but the actual impact against the adversary's fighting spirit and forces would contribute to the physical dislocation. This element was not performed in Irwin's deduction and the actual measures to fulfill the idea of indirect approach would not be accomplished. Hence, the true aim of the strategy was the dislocation of enemy forces. One or several of the following ways would produce it simultaneously:<sup>494</sup>

- 1 Upsetting the enemy's dispositions by sudden change of front and by dislocating the distribution of his forces.
- 2 Separating his forces.
- 3 Endangering his supplies.
- 4 Menacing the routes by which he could retreat in case of need and re-establish himself in his base of homeland.

The combination of modern (1980s) manoeuvre theories and indirect approach is a more delicate matter. I much agree with Richard Simpkin's definitions of the usability and capability of smaller mass to exert the basic ideas of indirect approach,<sup>495</sup> though it actually might be only one instrument in the strategy of indirect approach. Simpkin had elaborated the manoeuvre theory ideology on the basis "of winning the battle of wills by surprise" and on the physical level manoeuvre theory. His latter theory is based on the three-dimensional system with the interaction of mass, time and space. There are striking similarities with the ideas of indirect approach, although the psychological element seems to be covered by the idea of gaining surprise. Nevertheless, Simpkin did not accentuate the value of his three-dimensional model to overall combat worth, because he did not find a useful way of quantifying physical fighting power on absolute terms and because he depreciated the value of these non-physical factors to "purportedly mathematical models".<sup>496</sup>

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<sup>493</sup> Liddell Hart (1954), pp. 18, 25, 152 - 153.

<sup>494</sup> Liddell Hart (1929), p. 154; Liddell Hart (1954), pp. 339 - 340.

<sup>495</sup> Simpkin (1985), p. 133.

<sup>496</sup> Simpkin (1986), pp. 22, 83.

I like to accentuate the German ideas of the *Blitzkrieg* techniques, because these ideas had a clear link to the era of the rebirth of manoeuvre warfare ideas during the 1980s. Guderian had epitomised the *Blitzkrieg* method as “mobility, velocity, indirect approach”. The follow-through of the tactical penetration of a front was widened into a deep strategic penetration. A torrent-like process, either swerving round resistance or piercing it at a weakened spot keeps up manoeuvre. The persistent pace, coupled with the variability of the thrust-point, paralyses the opponent. After the original break-through and narrow thrust, the flexible drive of the armoured forces carried simultaneously several alternative threats, like Sherman did after the capture of Atlanta. The overall high tempo takes place too quickly for the enemy reserves to reach the spot in time. In effect, both tactical and strategic surprises are maintained from start to finish. Therefore, any systematic destruction of the adversary’s armies was not needed. Instead, the Germans bypassed combat units and penetrated deep into enemy lines to destroy undefended staging areas and command and control centres.<sup>497</sup>

## 5.2 The Nuclear Weapons and New Demands on Mobility

“When wireless control becomes more perfect, it is certain that we shall see the manless flying machine - the true aerial torpedo. When such a weapon is invented, the whole form of war may once again have to be recast”.

J. F. C. Fuller, 1943.

The British Army was mainly concerned with emergencies around the Empire. The RAF, on the other hand, carried the full responsibility of Britain’s deterrent capability, which became its main focus of attention, though it supported Army operations. Therefore, it is quite evident that the British land and air forces tended to drift apart during the Cold War period.<sup>498</sup> Britain needed their own nuclear weapons to be able to maintain the prestige of a great power. In addition, there were always some fears that the United States might return to the policy of isolationism. Britain still deemed herself to be in the league of great powers.<sup>499</sup> Moreover, the inability of the British and NORTHAG (Northern Army Group) to produce a credible conventional defence meant the early use of nuclear weapons.<sup>500</sup> After WW II there were considerable problems in the development of a concept of future war, including its general character and the military involvement. The situation had many similarities to the postwar era

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<sup>497</sup> Liddell Hart (1950), p. 272; Liddell Hart (1951), p. 36.

<sup>498</sup> Bagnall, Nigel: Concepts of Land/Air Operations in the Central Region: In The Journal of the Royal United Service Institute for Defence Studies, number 3, vol 129. September 1984, p. 59.

<sup>499</sup> Jackson and Bramall, p. 285.

<sup>500</sup> McInnes, p. 60.

since the early 1920's, though the main cause for this situation was the lack of comprehensive knowledge of atomic weapons.<sup>501</sup>

During the 1950s a tank pioneer, General G. Martel favoured a more mobile army, because the “present time” concept of organisations would lead to position warfare. His organisational “ideology” resembles closely his ideas from the 1930s, when there were small “cruiser” tanks for armoured divisions and heavier “I” tanks for “siege warfare” at any time. He still did not warm to idea of getting armoured protection or track transport for the supporting arms in the armoured divisions. It would be too expensive. The total number of 20 divisions with the support of tactical air force would be suitable for the defence of Western Europe against the 200 Soviet divisions, because these divisions would be highly trained and have superior mobility and armour. The Soviet divisions were only partly mechanised and horse transport would still be needed for the logistics of the bulk of the army.<sup>502</sup> According to Kenneth Macksey there are at least some similarities from the thoughts of the 1930s to the organizations of the 1970s. Both carry the ideas of elements from the fully armoured armies composed of fast light tanks, heavy main battle tanks and self-propelled guns (to missile vehicles) - the whole formation working as a combat team.<sup>503</sup>

Liddell Hart had had similar visions of lighter and faster tanks being able to cross obstacles and manoeuvre in the battlefield.<sup>504</sup> This “two tank” policy was criticed by Richard M. Ogorkiewicz in 1955. He called this division outdated. It has led into an argument that combat troops with infantry tanks cannot be mobile and that mobile troop with quick “cruiser” tanks cannot be fighting troops. This illusion has been developed by the ancient “cavalry role” taken by the armours. Ogorkiewicz also criticed the superiority of tactical thought of using armoured forces. This meant that “armoured division was no longer looked upon solely from the point of view of exploitation and strategic mobility”. The pioneering lead of the mechanization process had therefore been lost to the Germans before WW II because of this false policy.<sup>505</sup> Actually, this was confirmed by *Wehrmacht*-vintage Germans, who had accused the Americans and the British of “always thinking tactically. Never above corps level”.<sup>506</sup>

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<sup>501</sup> Lider, Julian: Facing the change 1945 - 1949. Essays on British military thought 1. The Swedish Institute of International Affairs. Stockholm 1980, p. 25.

<sup>502</sup> Martel (1950), pp. 224 – 226; Martel (1950b), pp. 6, 11.

<sup>503</sup> Macksey, p. 23.

<sup>504</sup> Liddell Hart (1951), p. 41.

<sup>505</sup> Ogorkiewicz (1955a), pp. 24 – 28.

<sup>506</sup> Simpkin (1986), p. 61.

Until the mid-1950s no coherent attempts to re-think the premises of conventional war had been undertaken in those states, even though tactical nuclear weapons were described as essentially “conventional”.<sup>507</sup> “They will be used, if we are attacked”, said NATO’s deputy supreme commander Field Marshal Montgomery in 1954. No other ways were found to stop the superior Soviet troops.<sup>508</sup> Any coherent ideas of how to use nuclear weapons or to protect against their influence were not produced. In the 1950s Liddell Hart admitted lacking any ideas on the subject.<sup>509</sup> It must be stated that Liddell Hart was not technically a prophet of nuclear battlefield nor did he present any original thoughts about the matter. He seemed to have lost his special role as a close and critical observer of the British Army. The focus had shifted from the tactical spheres of RTC training to more comprehensive and global issues. Anyhow, his thoughts on the themes of the usability of small armies and especially grand strategic considerations remained first-class.

Major L. McFadden had interpreted the future demands on the process of reorganizing the army in 1952. The need to maintain the speed of manoeuvre demanded that all ground forces be mounted. The danger lies in too slow concentration of the troops. It should be put into practice only at the critical moment and dispersed rapidly after that. The element of surprise could be achieved by the swiftness of the concentration. Hence, the long lines of communication and the “fatal disproportion of supply to combat vehicles” should be rearranged to support the manoeuvre.<sup>510</sup> Major-General H. E. Pyman had same kind of thoughts about the problem and the solution of concentration only few years later. Any massed concentrations of land forces on the west banks of Rhine would be foolhardy in the future. The similar defensive positions as at Alam Halfa would be most “susceptible to atomic attack”.<sup>511</sup> Neither the “traditional” technique of the narrow thrust of German *Blitzkrieg* nor Liddell Hart’s expanding torrent had any possibilities of survival unless they could be widely dispersed across the front so as not to present any lucrative targets for nuclear weapons.<sup>512</sup>

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<sup>507</sup> Dyster, pp. 398 – 401.

<sup>508</sup> Carver (1990), p. 782; Jackson and Bramall, p. 273. Some criticism against Montgomery appears. Jackson and Bramall claimed that as a CIGS, Montgomery was “supremely self-confident after his wartime victories” and he would see himself as a “military Messiah, sent second time”.

<sup>509</sup> Liddell Hart (1950), p. 96.

<sup>510</sup> McFadden, Lamar: The Adjustment to Atomic War. In *The Journal of Army Ordnance*, number 1, vol LXI. January – February 1952. Virginia 1952, pp. 20 – 21.

<sup>511</sup> Pyman, p. 223.

<sup>512</sup> Mearsheimer, p. 185.

Liddell Hart considered tactical atomic weapons as true means for reducing the size of armies during the late 1950s, since the concentrations of troops in defence or offence would probably be easy targets for any atomic assaults. These considerations remained unaltered since the Soviets also got equivalent instruments. In addition, dispersion would inherently increase the scope for flank-turning manoeuvres. Liddell Hart seemed to think that the time for small and mobile professional armies had finally come. Atomic weapons would favour NATO defence as they would be numerically inferior, but they might force the enemy to try to break through the defence without any numerical superiority by the use of superior tactics. Naturally, Liddell Hart discovered the problems of limiting the conflict only to the use of tactical nuclear weapons. It is quite fascinating that Liddell Hart valued the use of gas as an alternative just as he did in the 1920s. With even more sophisticated, but non-lethal forms of gas the battles would become more “humanitarian”.<sup>513</sup> This was a *topos* closely related to the discussions of just war and to limiting the atrocities of war.

NATO’s first years saw a dozen ill equipped and loosely integrated divisions hold the central sector of what was hypothesized as the theatre of military operations.<sup>514</sup> Naturally, with modern technology even the Western allies could achieve crushing manoeuvreability. The problem of NATO defence in Central Europe was because the Soviet ground strength was about 175 divisions, to which other 31 Warsaw Pact divisions could be added. Against this the Western allies had 25 divisions, some undermanned and badly equipped. Nevertheless, the Soviet divisions were structured for a short war; their logistics backup was inferior compared to Western divisions and their superiority in armoured forces was striking.<sup>515</sup>

During the mid-1950s, the U.S. Army developed a “pentomic” infantry division for the nuclear battlefield. The old structure of three infantry regiments supported by divisional artillery was replaced by five battle groups, a tank battalion of five field-artillery batteries and divisional artillery for general support. According to Friedman, this type of division could not concentrate firepower like earlier divisions on a conventional battlefield, because its battle groups were too weak.<sup>516</sup> Pentomic divisions provided a reduction in logistics. The logic of the organisation was based on better mobility, which could be used for moving troops across contaminated and blast-damaged areas. Smaller armoured formations capable of even more firepower were also needed to allow dispersion and to avoid producing any tempting targets.

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<sup>513</sup> Liddell Hart (1960b), pp. 78 – 83, 95

<sup>514</sup> Lider (1985), p. 467.

<sup>515</sup> Dyster, pp. 423, 425; Liddell Hart (1950), pp. 121, 273; Liddell Hart (1960b), p. 166.

<sup>516</sup> Friedman, p. 263.

The reduced conventional firepower was replaced by nuclear capability. It was estimated that subdivisional-size combat groups armed with nuclear “punch” could be capable of thwarting the Soviet armoured drives.<sup>517</sup> It was hoped that the tactical nuclear weapons could bring “battle back to battlefield” in lieu of strategies of mass destruction.

Unfortunately, the superiority of tactical weapons was brief as the Soviet Union developed its own tactical nuclear weapons during the 1950s. Besides, the Soviets were indeed considering the use of these weapons against the defender to make a hole through which their ground forces might pour. In addition, it became clear that nuclear weapons could not be used as if they were conventional weapons, because the after effect of the radius was too pervasive and unpopular among the civilian population.<sup>518</sup> Therefore Liddell Hart changed his views and argued strongly against these weapons, even though “in theory, these small-yield weapons offer a better change of confining nuclear actions to the battle-zone, and thus limiting its scale and scope of destructiveness”.<sup>519</sup>

The U.S. Army had several visions of the future nuclear battlefield and how to use conventional troops in it. The most widely accepted idea was to use nuclear weapons on crossing places and bridgeheads in order to concentrate the destructive effect. A mobile covering force would delay the enemy’s advance, while a mobile armoured force (observation force) would assemble in the rear to be ready for a countermove. The armoured forces would then attack and eliminate the remnants. An alternative concept was to disperse the defending forces in a series of well-protected static positions in dept. Each would be equipped with its own tactical nuclear delivery systems and strike with it the enemy forces that had penetrated the empty areas between the positions. Airborne forces would deliver the *coup de grâce*. The drawback was that this model required the total evacuation of inhabitants, which would cause serious problems.<sup>520</sup>

In the 1950s the focus of the British Army shifted to nuclear weapons. The maximum commitment of nuclear forces was contributed by its use as a “sword”, though it was accepted that the “shield” of ground forces should acquire nuclear weapons. The role of the armoured divisions was seen as to “dominate the opposing mobile forces”, as expressed in a lecture at

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<sup>517</sup> Dyster, pp. 402, 430.

<sup>518</sup> Freedman (1990), p. 747.

<sup>519</sup> Liddell Hart: Are Small Atomic Weapons the Answer. In Deterrence or Defence, London 1960. Quoted in Carver (1990), p. 785.



the RUSI in 1954 by Major-General H. E. Pyman, the commander of the British 11th Armoured Division in BAOR. His ideas of the arrangements in NATO defence are much the same as what the U.S. Army had visioned (these ideas are presented in Appendix 9). The armoured divisions are out of range of the bulk of enemy artillery. Two are deployed behind two infantry divisions as tactical reserve. They must be able to avoid being targets of atomic assaults and therefore their “battle groups” are dispersed. The third armoured division is deployed further back. The enemy forward echelon<sup>521</sup> is halted with the infantry divisions (firmly on the ground) and by a tactical counterattack of the armoured division. At the moment when the follow-up echelon is concentrated, atomic assistance will be needed. The two remaining armoured division would exploit the situation atomics created by “destroying completely what remains of the attacking force”. Their attack would be concentrated to the areas of their “main objective” from different angles.<sup>522</sup>

Pyman’s thoughts on the use of armoured forces resembled closely the tactical and former cavalry type missions of the interwar period. Lieutenant-General Sir G. Martel was curious to know more about Pyman’s ideas, because the preference for tactical counterattacks in lieu of any deeper (operational) strikes to the enemy rear areas was obvious. Naturally, Pyman tried to assure that he and his forces knew such methods of striking deep. Offensive spirit “is always the first requisite of a mobile force.” Still there were clear signs that the British concept of deep armoured thrusts was falling into oblivion. Only some “original” mechanisation and armoured “pioneers” were trying to keep their old concepts alive with only a little help. The supremacy of tactical level missions was more than clear. The logistic problems dogged the possibilities of battles in the nuclear battlefield, even in tactical manoeuvres. Pyman proposed that after the controlled dispersion and lightning concentration

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<sup>520</sup> Freedman (1990), p. 783. A Much more ambitious alternative was to drop nuclear weapons on the cities and military bases of the Soviet Union itself. Some airborne landings would follow to occupy the area and overthrow the discredited and ruined communist regime.

<sup>521</sup> Millar, Peter: The Central Region Layer Cake – An Essential Ingredient. In *The British Army and the Operational Level of War*. Edited by J. J. G. Mackenzie and Brian Holden Reid. Biddles Limited, Staff College, 1989, p. 19. Echelonment (sometimes called echelonning) is the basic means whereby the Soviets control the masses in successive waves of echelons, to break through a strong defence. Forces are echeloned at all levels, in each case the first echelon starting an assault and the second echelon moving through or continue the fight of exploiting a breakthrough.

<sup>522</sup> Pyman, pp. 223–224, 228. The line of operation against the follow-up echelon is not described accurately during the second phase of the battle. Any references to extend the operation to the areas of the enemy rear were not expressed. According to the main principles, the division will regroup “straight through gaps to meet for the first time as concentrated whole upon their main objectives which may be many miles away. Objectives must be chosen so that they compel the enemy to react to protect or regain them. When “the enemy makes the mistake of concentrating too heavily in space as he reacts, our reply might be atomic, followed by rapid armoured attack”.

of the armoured divisions the utilization of a “bomb hour”, when advance in the nuclear dropping zone is impossible, might be taken to resupply the troops.<sup>523</sup>

The demands of the deep armoured thrust finally went down the drain, when the concept of mobile defence gained more ground in the NATO defensive planning. Lieutenant Colonel Crosby P. Miller (U.S. Army) presented “a general picture” of the mobile defence at armoured division level in 1955. Armoured division was harnessed into defensive missions. The mobile defence was composed of a forward defensive position and a strong, highly mobile striking force. Actually, it was the same kind of concept as presented by Pyman a year earlier. Only the role of the infantry division seemed to be particularized: its role was not to stop the advancing Soviet troops, but to delay their advance and channel the enemy into areas favourable for counterattack.<sup>524</sup>

In 1955, the British Army reduced the number of armoured divisions to four. Naturally, these small tactical formations were based on the same British tradition as when the tank-, infantry- and cavalry brigades had been established in the 1930s. The preference of these formations to preserve tactical thoughts limited the doctrinal debates quite completely. This “new” trend of organisations was strengthened even more when one of the armoured divisions was broken up and dispersed among the infantry. The 1957 (see Appendix 8, figure 1) changes in adopting a brigade organisation altered the organisation even more dramatically. In addition, the move in 1957 to the brigade system paralleled similar moves in the U.S. Army the British Army and West Germany to make smaller combat units more flexible for independent actions. The European allies were in slow in following the Americans toward nuclear-based ground force structures.<sup>525</sup> Liddell Hart seemed to have visioned a new trend in organisational structures, as it is possible to observe in the organisation of the Armoured Brigade in the late 1940s and the actual organisation of 1957 (see Appendix 8, figure 2). His ideas might even have had some influence on the final outcome.

In 1960 there would be 17 infantry battalions, 14 armoured units and nuclear and conventional artillery organised as seven brigade groups. The total number of men in BAOR was 55 000.<sup>526</sup> Colin McInnes thinks that the organisations meant that the British were to fight

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<sup>523</sup> Pyman, p. 219, 227 - 228.

<sup>524</sup> Miller, Crosby P.: The Armoured Division in the Mobile Defence. In *Armor*, number 4, vol LXIV, July – August 1955. Washington 1955, p. 40.

<sup>525</sup> Dyster, pp. 376 - 377, 407.

<sup>526</sup> Crossman, R. H. S.: Western Defence in the 1960s. In *The Journal of Royal United Service Institution*, number 623, vol CVI. August 1961, p. 330. The number had reduced first to 77 000, then to 64 000 and finally

the war of attrition without the resources sorely needed.<sup>527</sup> Personally, I would approach the subject of nuclear period organisations and their planned battlefield use more comprehensively. It is questionable whether the traditional attritional style of fighting was the aim. Atomic cannons had been introduced in 1953 and they “were regarded quite simply as a bigger and better form of artillery”.<sup>528</sup> Firepower was mainly based on nuclear weapons and thereby the amount of artillery could be reduced and organisations cut down. It would have been too audacious to form an organisation vulnerable to nuclear strikes.

Series of reorganizations began in the U.S. Army in late 1956. The need to increase mobility on land and in the air was stressed at all levels of organisation. The need of manoeuvrability was accentuated. In the future, the need to operate independently in the battlefield was seen as even more obvious. It was seen that the APC's were needed for battle conditions and especially to cope with the constant threat of nuclear weapons and radiation.<sup>529</sup> There were many disputes over the question of armoured personnel carriers during the post-war period and one especially their implications for new doctrines. The French were one of the first to come up with a mechanised infantry combat vehicle in the 1950s. The AMX-VCI (*Vehicule Transport d'Infanterie*) offered chemical, biological and radiation protection. It remained in production until the mid-1970s. The British versions of the APCs were not completed until the early 1960. Only in 1958 did the British finally adopt tracked carriers, though finally only single mechanised battalion was developed. The British tactical considerations did not recognize the need for mechanised infantry, so little attention was given to infantry carriers. The preoccupation with nuclear forces put armoured warfare into a position of secondary importance.<sup>530</sup> This led Liddell Hart to conclude that the ability of infantry to accomplish follow-through missions next to the tanks remained a serious disability of the British organisations.<sup>531</sup>

The development of a new and lighter form of tanks was also needed. According to Liddell Hart, the “present day elephantine” trend had distorted the original tank ability to manoeuvre in the battlefield. The name of the post-war British tank “Centurion” described better the

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to 45 000. This caused so much protest among other NATO countries that the Government had to change its mind and kept the garrison of 55 000 men in the BAOR.

<sup>527</sup> McInnes, pp. 57 - 58.

<sup>528</sup> Dyster, pp. 391 – 395, 410.

<sup>529</sup> Ney, Virgil: The Evution of the Armoured Infantry Squad: Part II. In *Armor*, number 6, vol LXXIV, November – December 1965. Washington 1965, pp. 43 – 45.

<sup>530</sup> Dyster, pp. 13, 376 -377.

<sup>531</sup> Liddell Hart (1950), p. 275.

overladen Roman legionary than the reborn lightning style of Mongol cavalry operations.<sup>532</sup> Major-General H. E. Pyman realized that flexibility and the need to avoid casualties required measures to forsake the roads, as reiterated by Liddell Hart. The speed and power of armoured divisions would depend also on the future on tanks, albeit the infantry had some parts to play.<sup>533</sup> From my point of view, the dominance of firepower versus manoeuvre seems to be more flagrant than well proportioned. Thus, the ideas of “all-tank” within the British armoured organisations were still based on the steep division between the tanks and the infantry. Any coherent ideas of all-arms cooperation were not implemented and the movement of unprotected and immobile infantry troops was considered a restrictive element.

NATO forces were deployed in two army groups in Europe. The BAOR’s main fighting force was part of the Northern Army Group, NORTHAG. It consisted of four corps each established from different NATO countries (Belgium, Germany, the Netherlands, Britain and the III (U.S.) corps, which would come over to Europe in a period of tension). Each corps had the responsibility to defend its own area and the defence was therefore based on four individual corps.<sup>534</sup> Each of the four in-theatre corps conducted their battle independently. This led to the allocation of territory throughout the chain of command. Finally all divisions and brigades had their own areas of defence without any direction as to the overall design for battle.<sup>535</sup> The Central Army Group (CENTAG) similarly contained four corps sectors. The presence of the British troops on the Continent was treated as a sort of security for the maintenance of British national independence, because the dominance of a hostile power in Europe was seen as major threat to British capacity to maintain and protect any extra-European interest she may retain.<sup>536</sup> Some doubts were voiced whether the Dutch, Belgian and even the British capability would be sufficient to withstand a Soviet attack; therefore, the 1st German Corps (NORTHAG) could be moved rapidly to augment the BAOR. Furthermore, there would be an American corps in the NORTHAG rear.<sup>537</sup>

### 5.3 New Ideas in Conventional Warfare

“In their [i.e. British] opinion, only that military thinking which followed standardized rules

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<sup>532</sup> Liddell Hart (1950), p. 286.

<sup>533</sup> Pyman, p. 225.

<sup>534</sup> McInnes, p. 55 - 56.

<sup>535</sup> Bagnall (1984), p. 60.

<sup>536</sup> Howard (1974a), pp. 9 – 10.

<sup>537</sup> Mearsheimer, pp. 179 - 180.

were acceptable... This attitude of mind created prejudice, the consequence of which was incalculable.”

Field Marshal Erwin Rommel

The most dramatic crisis took place in Egypt, where Franco-British troops launched the Operation Musketeer against Port Said in 1956. It was a crucial turning point in the policy of Britain (and France), also considering their international standing. The purpose of the attack was to seize the Suez Canal again under to British rule. In spite of tactical level success, the whole operation was a failure in strategic terms. Political pressure from the United States obliged the British and French governments to accept the cease-fire terms.<sup>538</sup> Liddell Hart criticized the British policy for having an “Old Look” in contrast to the American “New Look”. The overall slowness of the operation convinced him of the backwardness of British military organisations and especially of British military thought.<sup>539</sup> Britain appeared to be politically and military weak and she was no longer able to act independently in a crisis.<sup>540</sup> Because of these experiences, British researchers expected some changes in the military art of future wars:<sup>541</sup>

- 1 The speed of operations would increase.
- 2 Tactical aircraft and airborne troops would play a more significant role.  
Expensive air mobility and amphibious warfare equipments were needed.
- 3 The role of securing a continuous supply of troops would increase, because of the latent threat of the use of nuclear weapons.

The important Defence White Paper, called after Duncan Sandys, Minister of Defence, as “Sandys Defence White Paper”, was published because of this total catastrophe in 1957. It cut defence spending substantially. Almost every area of military affairs was placed under serious consideration. British Continental commitments were under reassessment because conventional threats were not regarded as suitable any more. Similarly the Royal Navy had to struggle for its existence, and it tried to justify its fleets and particularly its aircraft carriers and cruisers.<sup>542</sup> As British Prime Minister Harold Macmillan stated, “Let us be under no illusion; military forces today are not designed to wage war; their purpose is to prevent it”. The Defence White Paper also formulated the doctrine of Global Strategy that announced the necessity of building an independent British strategic nuclear force. It was the “thermonuclear

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<sup>538</sup> Farrar-Hockley, pp. 334 - 336.

<sup>539</sup> Liddell Hart (1960b), pp. 28 - 29.

<sup>540</sup> McInnes, p. 10 - 11.

<sup>541</sup> Lider (1981), p. 128; Jackson and Bramall, pp. 306 - 307.

look at defence”, or the “New Look”. As a characteristic feature of this approach, the overseas garrisons of the British Army were replaced by a central strategic reserve. The growing role of the air force was an axiom, a basic instrument of the nuclear strike.<sup>543</sup> This was just what Liddell Hart had had in mind, as he had advocated that at least half of the divisions of NATO’s defensive should be held as a mobile reserve. These ideas savour his interwar thesis of “limited liability”.

In addition, Liddell Hart found the tactical methods and organisations of NATO armies to follow too closely their 1944-1955 patterns. The concept of fighting the “main battles” was similarly outdated, as the possible swift manoeuvring concentration of Soviet armours would exploit a deep strategic penetration over the static defence. Concentration should be replaced by the fluidity of force and controlled dispersion. Liddell Hart likened this to a swarm of hornets, which do not concentrate – “they attack you from all directions simultaneously”. Liddell Hart proposed that inert infantry troops should be replaced by a citizen militia, which should form a deep network of defensive posts in forward area of defence. The rest would be guarding key points in rear areas against an airborne attack. In addition, the standing army should consist of twenty-six divisions, partly armored and fully tracked. There should be a high proportion of tanks and light infantry.<sup>544</sup> The concept of citizen militia is particularly interesting, because Liddell Hart had felt an ominous aftertaste about the guerilla-type action after WW II. He was frightened that his interwar writings had encouraged violent irregular war, which had proven to be extremely brutal and difficult to handle.<sup>545</sup>

Some Army spokesmen stressed the need to prepare the BAOR for actual combat instead of having it function only as a trip-wire for nuclear war. The modification of tactical doctrines and the modernization of equipment were crucial.<sup>546</sup> Britain adopted a pragmatic attitude towards nuclear weapons. The British attraction to sustain a wide range of overseas political and military commitments produced the ability of combining limited and total war strategies with the use of nuclear weapons.<sup>547</sup> The nuclear-related shrinkage of conventional forces was particularly apparent in Britain in the early 1960s, when conscription was abolished from

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<sup>542</sup> Farrar-Hockley, p. 338. The overall cut in military forces from 6900 00 to 375 000. European forces were cut from 77 000 to 64 000.

<sup>543</sup> Lider (1981), pp. 108 – 109; Lider (1985), p. 321.

<sup>544</sup> Liddell Hart (1960b), pp. 171 – 173, 177 - 183.

<sup>545</sup> Liddell Hart (1950), pp. 53 – 57.

<sup>546</sup> Lider (1985), p. 295.

<sup>547</sup> Verrier, Anthony: Strategically Mobile Forces – U.S. Theory and British Practice. In *The Journal of Royal United Service Institution*, number 624, vol CVI. November 1961, p. 481.

1962 onwards.<sup>548</sup> Britain's defence would be dependent on her own independent nuclear deterrent and, to back up this strategy threat, "nuclear streamlined forces" would be built in place of the conscription army.<sup>549</sup> The nuclear deterrence made conventional war in Europe unlikely. Communist aggression outside Europe would have to be met by direct defence, in which the British Army would play an important role. Therefore, Britain was formed to face more insurgency-based conflicts rather than large-scale wars such as Korea.<sup>550</sup>

The British practice in Kuwait in 1961 provided a most apt example of the exercise of pragmatic British policy. At least these lessons learned were valuable for the challenges of American doctrinal development.<sup>551</sup> The Persian Gulf was an area in which Britain could claim long connections and expertise. A British paraborne battalion group and an infantry brigade from Kenya were deployed to the territory at the request of the ruler to shield Kuwait against the Iraqi threat to its newly gained independency in 1961. The British force withdrew from Kuwait in the same year, but a paratrooper battalion with armoured elements was established in Bahrein for the support of the Gulf emirates. The operation succeeded, because of "an uncertain opponent. A determined enemy might be another matter." However, the ability of Britain's air-borne and sea-borne strategic reserve fulfilled its purpose.<sup>552</sup> Liddell Hart wondered why Britain, so dependent on her sea power, had not developed the capacity of marines, similar to United States. The most important reason for this was the Army's underrating of any specialized forces not based on traditional infantry training. Liddell Hart emphasised the value of highly professional *élite* forces. It seems he had stepped aside from his ideas of "traditional" mechanised warfare, and adopted a new idea based more closely on the traditional "British Way in Warfare". British had, according to Liddell Hart, paid heavily for not recognizing the need and value of *élite* forces. He saw the current situation leading to local and limited aggression. Therefore, the need of amphibious and the airborne forces would become even more pressing. The Marine division should be based on similar structures as the U.S. Marine Corps, which is a service of three-in-one.<sup>553</sup>

The decision of the overall mechanisation of the Red Army infantry division was made as early as in 1963. Tukhachevsky's concept of the "offence in depth" came into favour once

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<sup>548</sup> Yardley, Michael: Towards the Future. Article in The Oxford History of the British Army. Oxford University Press 1996, p. 426.

<sup>549</sup> Crossman, p. 329.

<sup>550</sup> McInnes, p. 9.

<sup>551</sup> Verrier, pp. 479 – 485.

<sup>552</sup> Verrier, p. 485.

again, though the recent development in the APCs had not settled the problem of the fighting ability of the infantry. Both superpowers had equipped their forces with “battle taxi”-type carriers of the 1950s. The introduction of the infantry-fighting vehicle (called BMP) in 1967 made a significant impact on American armour experts. According to Paul Dyster, it displayed their own equipment and mechanised methods in an unfavourable light. The American standard carrier in the early 1960s was the M-113 all-purpose vehicle, as mentioned earlier. Paul Dyster argued that the M-113 was not suited to frontline battlefield conditions, the European environment or guerilla war context. However, official opinions clearly indicated problems only in guerilla warfare, because of the lack of weapon ports to mounted infantry. Dyster seemed to be convinced that because the infantry was not able to fight while mounted, this vehicle lost its sense as being an infantry-fighting vehicle (IFV) in an encounter battle against the Russian BMP. Naturally, the actual firepower efficiency between these vehicles lies in the comparison of the primary armaments as also referred to by Dyster. Although serious attention had been given to finding a successor to the M-113, only modified versions were eventually produced. Not until the early 1980s did the U.S. Army come up with a design of the M-2 Bradley IFV that finally met the demands of the infantry.<sup>554</sup>

It was also deduced that the Pentomic division had only little staying power without the use of nuclear weapons. Therefore, the New Look of the organisation provided the ROAD (Reorganization Objective, Army Divisions) structure in 1963. The number of 42 000 troops was filled into logistics and artillery forces necessary to provide proper capability to conventional conflict. In addition, the number of armoured and mechanised divisions was increased.<sup>555</sup> Naturally, the BAOR was publicized as having the most effective professional capacity and highly modernized war outfits, though any progress to develop the rotary-wing capability was underrated.<sup>556</sup> Incidentally, very few officers of the British Army still challenged the valid nuclear deterrence, which was based on the NATO doctrine of flexible response.<sup>557</sup> Some discordant notes were expressed for its lack of clear guidance as to the use of conventional forces, but the amount of conventional forces was inadequate and therefore

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<sup>553</sup> Liddell Hart, B. H. (1960a): The Value of Amphibious Flexibility and Forces. In *The Journal of Royal United Service Institution*, number 620, vol CV, November 1960, pp. 483 - 492.

<sup>554</sup> Dyster, p. 428 – 452. It is quite a well known fact to all that have tried to shoot accurately from a moving assault boat or from a narrow weapon port of the APC that the true effective field of fire and the actual accuracy of the fire are highly restricted.

<sup>555</sup> Dyster, pp. 430 – 431.

<sup>556</sup> Knuutila, Jukka: *Tavanomaiset asevoimat Euroopassa 1970-luvulla. Strategian tutkimuksia. Julkaisusarja 1, Sotatieteen laitos n:o 7, Helsinki 1978, pp. 25, 47.*

<sup>557</sup> McInnes, pp. 13, 17.



any operation lacked realism.<sup>558</sup> There is evidence that the Soviets had prepared for a possible nonnuclear conflict in Europe since the early 1970s.<sup>559</sup> The “encounter battle tactics” of the Soviet Army favoured the superiority order of 5:1. Moving rapidly and driving right into the enemy column with fierce fire at point-blank range, the Soviet troops certainly caused serious problems for the defence of NATO forces.<sup>560</sup>

The art of war was aimed at the survival of forces in a nuclear battlefield. Therefore, firepower and positional aspects or the theme of attritional warfare bypassed any other approaches to war until the late 1960s. BAOR strength was allowed to decline because of the trust in nuclear deterrence. Relatively poor levels of professionals compensated for the poor levels of equipment.<sup>561</sup> On the other hand, this was an officially approved excuse to neglect the development of a coherent doctrine. The battle technique was thus taken into consideration more. Colonel G. P. M. Wheeler remarked in 1968 that in the European battle theatre armour and APC-mounted infantry would only rarely fight separately for long. The best balance would be a force of two sub-units, one armour and one infantry plus the necessary administrative elements. The modern anti-tank weapons were seen superior to any tank, and it was assumed that the lifespan of the development of any “main battle tanks” would be over soon.<sup>562</sup>

The Reorganisation Objectives Army Division, or ROAD, was designed to be able to operate in both a conventional and nuclear war during the late 1960s. Its organisation was based on permanent manoeuvre battalions added in variable numbers to combat support troops. An aviation company or battalion was added as needed.<sup>563</sup> The development of arms technology had essential influence on the use of troops. Particularly the development of anti-tank missiles had an extremely widespread impact on the role of British armour, because they were removed from the infantry support role and concentrated on offensive-orientated battle groups for counterattacks. Defensive line was soon discovered to be too weak against Soviet attacks. Britain absorbed the current ideas of the U.S. Army reorganisation. Mobile linear defence was therefore replaced in a more flexible plan of “killing zones” or “armoured killing zones”. The British Army hoped to inflict notable attrition on the enemy during the series of positional

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<sup>558</sup> Lider (1985), p. 475.

<sup>559</sup> Mearsheimer, p. 13.

<sup>560</sup> Dyster, p. 440.

<sup>561</sup> McInnes, pp. 55 - 56.

<sup>562</sup> Wheeler, G. P. M.: In *The Army Quarterly and Defence Journal*, Vol XCVII. William Clowes & Sons Limited, London, October 1968, pp. 53 - 64, pp. 55 - 63.

<sup>563</sup> Friedman, p. 263.

(and therefore tactical) battles within the context of a mobile campaign. British corps would be deployed in two echelons. The first echelon of two divisions would be close to the inner German border and the second echelon would assume the main line of defence in accordance with the NATO principle of forward defence. The second echelon would assume the main line of defence, while the original first echelon regrouped for further action.<sup>564</sup>

Before the flexible Response, the NATO air forces and armies had been preparing for completely different wars. The air forces had assumed that the aircraft would be used to deliver the nuclear bombs during the first hours of a major incursion, while the army was planning to fight for ten to 90 days. Gordon Welchman appreciated Liddell Hart's ideas of the indirect approach, because only with this method could the Soviet lightning attack be repelled. The Allied failure to respond to the German attack on France in 1940 could easily be repeated if the NATO defence would contain no element of surprise. One concept suggested that the NATO defence of West Germany would contain elements of following characteristics:<sup>565</sup>

1. Well-coordinated forward frontier defence.
2. Territorial militia covering whole West Germany.
3. A resistance movement in areas overrun by Warsaw Pact forces.
4. Mobile reserve forces to cover the territorial militia units.
5. Highly skilled mobile reserve to provide "fire brigades" capability.
6. Highly skilled units trained for clandestine operations in support of units of the resistance movement.

The U.S. Army was never comfortable with its doctrine of Active Defence (FM 100-5, 1976), which intended to hold a line and to absorb a Soviet blow and counterattack to regain lost territory. Since the late 1970s, new ideas were refined. Active Defence was based on the immediately started withdrawal; the new doctrine was constructed on a counterthrust at the outset of war. Actually, the possibility that the Warsaw Pact states could launch a crushing *Blitzkrieg* against Western Europe became very real.<sup>566</sup> At the same time, the British Army continued to reduce the strength of the BAOR. Finally, in 1978 it contained four weak armoured divisions and a light infantry force organised into task forces that were raised as 1. Corps. The main idea was to reinforce the BAOR with the United Kingdom Land Forces

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<sup>564</sup> McInnes, pp. 56 - 58.

<sup>565</sup> Welchman, Gordon: An Integrated Approach to the Defence of West Germany. In The Journal of Royal United Service Institution for Defence Studies, number 3, vol 119. London, September 1974, pp. 49 – 52.

<sup>566</sup> Reid (1989), p. 5.

(UKLF) together with logistic and rear area defending units.<sup>567</sup> Unfortunately, no re-equipment programmes helped the BAOR to improve its capacity to face its planned adversary. The end of National Service meant garrisons being reduced to minimum personnel and some emphasis being placed upon a central strategic reserve. In addition, the forces based overseas were largely infantry-oriented and used older equipment.<sup>568</sup>

According to Colin McInnes, the British Army viewed the defence in Germany as more in terms of a series of small tactical level engagements and still failed to develop a corps plan or a coherent concept of operations. The theme of accentuating the tactical level of fighting had definitely its roots in the British way in warfare.<sup>569</sup> It seems as if the ideas of Brigadier C. Broad's booklet "Mechanised and Armoured Formations" from 1929 were not at all outdated. He had proposed independent attacks by one or more armored brigades lasting up to 48 hours and attacks in mobile operations by armoured brigades in cooperation with infantry brigades. The seeds of the tactical ideas of British armoured warfare were truly sown during the late 1920s and it seems that they still bore fruit during the cold war period.

## 6 THE REBIRTH OF MANOEUVRE WARFARE THEORIES

"With two thousand years of examples behind us we have no excuse, when fighting, for not fighting well."

Colonel T. E. Lawrence (of Arabia)

The development of the Operational Manoeuvre Group<sup>570</sup> (OMG) by the Soviets in the late 1970s changed the whole course of NATO operational ideas. This highly mobile, division-sized composition was designed for independent operations at the enemy rear. Therefore, in NATO military circles the British Army was widely perceived as deficient in equipment.<sup>571</sup> There were two separate schools of analysts to comment on the NATO anti-tank threat inside the Soviet Army. The "artillery school" argued that only massive suppressive fire by artillery could eliminate anti-tank defences. Artillery meant both field guns and the direct fire of self-

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<sup>567</sup> Strawson, John: *The Thirty Years Peace*. In *The Oxford History of the British Army*. Oxford University Press 1996, pp. 343–361, p. 355.

<sup>568</sup> McInnes, pp. 3, 13, 16 - 20

<sup>569</sup> McInnes, pp. 55 - 56.

<sup>570</sup> Millar, p. 20. The OMG of a reinforced division or army size would replace the second echelon and amounting to 20-30 per cent of the front forces. The OMG could be inserted on at least two of the thrust lines attacking a NATO Army Group, creating the potential for a huge pincer movement with objectives up to 175 kilometres in NATO's rear.

propelled guns. The “manoeuvre school”, that included mostly tankers, suggests that the way to avoid the full effect of anti-tank technology is to use superior tempo. The first days of combat remained a critical period for NATO, because it would take as long as two weeks to complete all the necessary movements. Total surprise and speed might make it possible for the Soviet columns to engage NATO forces before they had reached their forward destinations and prevented NATO anti-tank from constructing a dense linear defence. This would be an optimal pattern to improve the efficiency of anti-tank weapons.<sup>572</sup> These ideas and arguments were not unfamiliar to British, French or even German military analysts during the interwar period. These schools could be renamed as attrition and manoeuvre -schools. William Lind claimed that the methodical and attritional ideas of battle remained in American ground doctrine until the 1980s.<sup>573</sup>

The “American Way in Warfare” had traditionally relied on massive firepower to win attrition-based fights.<sup>574</sup> According to Professor Lawrence Freedman, the full exploitation of superiority in all departments wherever and whenever possible has always represented the American Way in Warfare.<sup>575</sup> It was “a national style of warfare, defined by its attritional impulse even in those instances when a more strictly modulated application of violence may have been more appropriate”.<sup>576</sup> The demands for flexibility in army operations emerged from the traditional features of American tactical methods. The army had become firepower-oriented. Considerable emphasis was laid on elaborating the character of combined arms. Any manoeuvres without the presence of “artillery, air defence artillery, engineers, aviation support or logistical attachments was failing to train the full complexity of the combined arms team in manoeuvre warfare.” Naturally, much was needed to meet the greater demands of the near future, since manoeuvre had been a neglected topic during the last decades.<sup>577</sup> Some attritional features could still be observed in the realization of new methods during the Gulf War.

The new doctrine of Air Land Battle required early attacks against the enemy’s rear, both on his fixed installations and on the logistic tail feeding his advancing spearhead. In addition, the

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<sup>571</sup> McInnes, p. 58 - 59.

<sup>572</sup> Dyster, pp. 477 - 479.

<sup>573</sup> Lind, p. 5.

<sup>574</sup> yster, p. 531.

<sup>575</sup> Freedman (1997).

<sup>576</sup> Spiller, Roger J.: Introduction to Richard Swain’s book *Lucky War. Third Army in Desert Storm*, p. xxvii.

<sup>577</sup> Richardson, William R.: *Training for Manoeuvre Warfare*. In *Armor*, vol XC, no 4, July – August 1981, pp. 31 - 33.

combination of doctrine and equipment shaped a new “Army 86” structure.<sup>578</sup> It was not the organisations or any sophisticated equipment that would make the crucial difference. Hence, a comparatively heavy emphasis was placed on making the force identical in present-day tactics and more universally to uniform visions of the future combat environment. During the past decades the force had presented no common ideas on the use of forces. No two units were implementing their tactics similarly. The actual difference between other NATO countries must have been even more profound. It was said that the reorganisations of Pentomic and ROAD concepts had produced organisations that “had not been taught how to function in or use that concept.”<sup>579</sup> It must be considered axiomatic that the importance of technological innovations to NATO’s history is significant. For much of NATO’s history, technology has been considered to remain in a doctrinal vacuum and therefore such of advancements have often been seen as a miracle cure for any faced condition.<sup>580</sup> The effort to make the organisation more suitable for manoeuvre warfare or the ability to follow the movement of the armoured spearhead was needed. The M113 had been designed to follow the slower M-60 tank. Any faster successors caused problems, as noticed with the M-1 Abrams.<sup>581</sup>

Until the late 1980s and the full acceptance of the NATO commitment no real attempts were made to change this traditional British Army outlook. Unfortunately, it was external pressure that finally forced Britain to moderate her military doctrines.<sup>582</sup> The armoured warfare development had immigrated to Fort Knox, Kentucky, where the United States Army Armor School (USAARS) holds some post-pioneering work along the ideas of armoured battle concepts. The period of Salisbury Plain as a centre of attention had been lost a long time ago.

General Sir Nigel Bagnall was appointed as commander of the 1st British Corps in 1981. Since the early 1970s, he had argued that the corps plan should be viewed as a single battle allowing resources to be concentrated on the decisive point. These views were complemented during the early 1980s. He reproached his commanders for being too literal with the NATO concepts of forward defence and flexible response. The reactive method was unsuitable against a numerically superior enemy. Bagnall’s response was to advocate greater operational level mobility as opposed to the pure tactical concepts. The idea was to seize the initiative

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<sup>578</sup> Friedman, p. 263 – 265; Wagner, Lewis C.: Comments under the title of “Commandant’s Report”, USAARMS. In *Armor*, vol XC, no 4. July – august 1981, p. 37. As a Commandant of the Armour training center, Wagner was the head of the development of this branch.

<sup>579</sup> Wagner, pp. 37 – 38.

<sup>580</sup> Reid (1993), p. 3; Reid (1989), p. 6.

<sup>581</sup> Dyster, p. 445.

<sup>582</sup> Strachan, p. 411.

during the battles of elastic defence, strong reserves and more intensive cooperation with air and ground forces. Victory was to be gained only by a vigorous and reckless but not foolhardy assault, as this could throw the enemy off balance.<sup>583</sup> Later, as commander of NORTAG (until 1985), he became a leading figure of NATO's application of the Air Land Battle doctrine. He demanded a joint concept of operation vital to the cooperation between army group and air forces.<sup>584</sup>

## 6.1 The Concept of Air Land Battle Doctrine – The American Way in Warfare?

“We cannot afford to drive into our well-protected firing positions, hunker down, and stay there.”

Major Michael S. Lancaster, 1982.

August 1982 witnessed the new version of the U.S. Army Field Manual, FM-100-5. It finally broke the “firepower-attrition” tradition, or at least it was marketed so. It emphasized the importance of counteroffensive operations deep behind the enemy lines and keeping the enemy off balance. Colonel John Boyd added that in victorious campaigns throughout history “agility, deception, manoeuvre and all the other tools of combat are used to face the enemy with a succession of dangerous and unexpected situations more rapidly than he can react to them”.<sup>585</sup> Most important impressions were the wiping away of the ideas of limited liability to NATO defence. As the Army doctrine stated, “enemy leaders must be made to understand clearly that if they choose to move militarily, no longer will there be a *status quo antebellum*, something to be restored.”<sup>586</sup> A totally new period in the U.S. Army had been declared open, even though there seemed to be basically nothing original or revolutionary in it.

Naturally, the Arab-Israeli wars influenced warfare thought and similarly did the U.S. Army's new concept of Air Land Battle. Since the Yom Kippur War in 1973, the trend has been towards even more effective anti-tank weapons (missile technology). The conflict witnessed an overall trend toward increased attention on the conventional armies. Neither the United States nor other NATO countries were willing to concentrate millions of men in a future battlefield. President Ronald Reagan's Administration Director of the Defence Advanced

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<sup>583</sup> McInnes, pp. 60 – 63.

<sup>584</sup> Bagnall (1984), p. 59.

<sup>585</sup> Dyster, p. 536.

<sup>586</sup> Dyster, p. 537.

Research Projects Agency claimed in the early 1980s that “we have no other alternative but to turn to high technology”. Paul Dyster interestingly compared this mentality to the “Maginot mentality” of the 1930s, because on both occasions the reliance on technology was far greater than on the adaptation of innovations within the art of war. Innovations in force structures might have had an even greater effect.<sup>587</sup> Naturally, this comparison to the primarily static Maginot defence does not do justice to the more dynamic groundings of the Air Land ideology.

The idea of “manoeuvre warfare” is broad, because it is actually an entire style of warfare created from the late 1970s onward. Lind specifies it as an ability to create a superior speed and tempo<sup>588</sup> in a disorderly, uncertain battlefield. Actually, it would be best to regard it in a historical context of twentieth century military history.<sup>589</sup> Robert Leonhart is willing to add the psychological impacts into this concept, because the mere action of encirclement does not cause any paralysis within the enemy forces.<sup>590</sup> According to Daniel Bolger, the primary aim of manoeuvre warfare is not to subdue the enemy troops, but to shatter the ability of entire enemy formations to fight in an organised way, paralyse enemy commanders and cause panic among them. Therefore, firepower is not important element as it is in attrition warfare.<sup>591</sup>

It was stated that the Field Manual 100-5 had drawn heavily on the writings of Sun Tzu, Clausewitz, J. F. C. Fuller and B. H. Liddell Hart.<sup>592</sup> That probably signified something mythological, something classical and revolutionary. The genuine content is at any rate quite the same as presented seventy years earlier. However, new doctrine was an outstanding adaptation to totally different military thought than what was practiced throughout the entire twentieth century. Actually, the new concept was based more on new methods of training rather than any technical innovations. It was the idea of manoeuvre that had been neglected in a defensive-minded and firepower-oriented age. Lieutenant General William R. Richardson saw the ability to manoeuvre and to implement manoeuvre ideas in the battlefield as a

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<sup>587</sup> Dyster, pp. 479 - 480, 499 - 500.

<sup>588</sup> ATP-35 (B). Land Force Tactical Doctrine (Change 1). NATO Publications. Published in 1995, p. XXVI. Tempo is the rate of rhythm of activity relative to the enemy, within tactical engagements and battles and between major operations. It incorporated the capacity of the force to transition from one operational posture to another. Tempo seeks to impose threats to which the enemy is increasingly unable to react; his responses are made inappropriate in terms of either time or space.

<sup>589</sup> Lind, pp. 3 - 4, 8.

<sup>590</sup> Leonhart (1993), p. 52.

<sup>591</sup> Bolger, Daniel P: Maneuver Warfare Reconsidered. In *Maneuver Warfare. An Anthology*. Edited by Richard D. Hooker, Jr. Novato CA 1993, p. 25.

<sup>592</sup> Freedman (1997). Also the writings and thoughts of Milschke and Willoughby were included in this manual.

challenge of combined arms team. “Field grade officers – especially those selected for command – must learn how to plan and sustain flexible manoeuvre operations.”<sup>593</sup>

Incidentally, the idea of using mobile forces against the bulk of a Soviet army attack was not born in the eve of the 1980s, but in the late 1940s. One of the most influential characters of armoured battle ideas, General Martel, had been convinced of the ability of small highly trained troops to have a significant value in conventional deterrence. He criticized the static role taken by the Western Nations, because WW II had clearly demonstrated the value of aggressive and determined attack ideology.<sup>594</sup> In addition, Major-General Pyman had visioned in 1954 that in future air/land battle the army must contain a mobile, but also a more static element, though “armies as a whole will have to concentrate more quickly in time and less thickly in space”.<sup>595</sup>

Actually, the whole concept of Air Land Battle embraces both the notions underlying the “Integrated Battlefield” and those that were underlying the “Extended Battlefield”. The first embraces the variety of ways that can be used to deliver a spectrum of “lethal” weapons (nuclear, chemical and conventional weapons) to destroy or otherwise render ineffective an enemy force. The latter embodies operations that are conducted within the framework of strategic defence. The enemy is attacked into the full depth of its defence formations. The concept requires “the use of national and joint service air and land assets for both target acquisition and attack, hence the notion Air Land.” The future battlefield environment was seen to be characterized by extraordinary lethality by the integrated use of nuclear, chemical and electronic warfare, furious pace in mobility and nonlinearity, where normal notions of “front” and “rear” areas no longer apply.<sup>596</sup> Naturally, the need to maintain linear operations was preserved, especially if large ground formations (divisions, corps) and sophisticated logistic connections were to be used, as actually was implemented during the Gulf War.

A deep and selective strike was an essential element in the new doctrine. Firepower was seen as an important element in successful operations on a battlefield deep inside enemy territory.<sup>597</sup> This theme of “seeing deep” contained requirements of disrupting, delaying and destroying elements of the follow-up echelons for preventing their premature arrival in the

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<sup>593</sup> Richardson, pp. 31 - 33.

<sup>594</sup> Martel (1950b), p. 6 - 11.

<sup>595</sup> Pyman, p. 223.

<sup>596</sup> Lancaster, Michael S.: The Armor Force in the Air Land Battle. In *Armor*, number 1, vol XCI. January - February 1982. Kentucky, pp. 24 - 26.

<sup>597</sup> Salminen, p. 34.



FEBA (see Appendix 10). There are two vital payoffs in this concept. Firstly, providing “manoeuvre” battalion and task forces space and time to fight the defensive battle and creating windows to mount offensive action. The decisive impact would therefore be aimed against the weakened follow-up echelons in a manner considered by Major-General H. E. Pyman in 1954, as presented in Appendix 9. Only the measures to disrupt and delay follow-up echelons were added to the old concept. I would like to accentuate the obvious similarities of these adaptations, though the actual technological and intellectual differences needed to accomplish these tasks were very different. Secondly, in Air Land Battle the mere stopping of the assaulting echelons was not enough, but to destroy them by violent offensive action. The combined use of the Extended and Integrated Battlefields would thus crush the adversary’s army.<sup>598</sup>

Based on the idea of superior tempo presented earlier, the modern battlefield was seen as a series of “observation-orientation-decision-cycle actions”. According to this idea, the commander with the faster cycle would eventually win, because he is already doing something different by the time the enemy is still occupied by the previous action. Lieutenant General William R. Richardson and Major Michael Lancaster presented similar thoughts. The enemy commander would face a situation where his decision process has been repeatedly interrupted and reinitiated. He would sense the loss of initiative.<sup>599</sup>

The “Air” phase of the new doctrine envisioned the use of attack helicopters and air forces to influence the enemy formations as much as 250 kilometres behind the front.<sup>600</sup> However, this concept of connecting the helicopters and the ground “punches” was initially under confusion. Based on the old ideas of Active Defence (U.S. Army FM 100-5, 1976), the flexibility and the immense firepower of helicopters were used to “kill tanks” first and foremost about 10 kilometres behind the FEBA. Edward M. Browne, the Advanced Attack Helicopter (AAH) project manager, assured that the AAH should be integrated into the scheme of manoeuvre of a combined arms team.<sup>601</sup> Similarly, Air Marshal Sir Patrick Hine preferred to hit against follow-up forces with “massed and lucrative targets” and especially “dropping key bridges over the wider river obstacles shortly before the enemy reached them”. The tasks of Close Air Support (CAS) would be in a second hand position as the killing zone of surface-to-air missiles restricted the efficient use of fighters. Nevertheless, it would be easier to expand the

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<sup>598</sup> Lancaster, pp. 26 - 27.

<sup>599</sup> Lancaster, p. 27; Dyster, p. 536 - 537.

<sup>600</sup> Dyster, p. 537.

Fighter Zone to the areas of enemy rear than to hedgehopping in the area of FEBA, already massed with friendly air-to-surface missiles.<sup>602</sup>

The “Army 86” reorganisational studies commenced in 1978. They focused on the Army’s primary fighting unit – the heavy division, which existed in two types, armour and mechanized infantry. The Division 86 Study focused on the heavy division as the element of the fighting Army, critical to the prime strategic theatre of Central Europe. The Division 86 heavy division briefly numbered approximately 20,000 men. There were 6 tank battalions and 4 mechanized infantry battalions in its armoured version, 5 tank and 5 infantry battalions in its mechanized infantry form.<sup>603</sup> In the “Army 86” Armour Force, there would be sophisticated command and control compositions. Divisional cavalry squadron (gunships and choppers) would conduct detailed reconnaissance within, to front flanks and in the rear of division. It would also assist the movement of divisional units and facilitate command and control for the division commander on the integrated battlefield. The actual “manoeuvre” brigades in Division 86 would contain three “normal” brigades and one Cavalry Brigade, Air Attack (CBAA) that would provide unity of command for all division aviation. It was to be an instrument of flexibility, which could be used against the enemy at the Forward Line of Troops (FLOT) or across it. Hence, it was a tool for corps and divisional commanders in keeping the second-echelon units from arriving at the FLOT too early and becoming psychologically dislocated.<sup>604</sup> The Army 86 was seen to be especially suitable for any fighting deep inside the opponent’s territory because of the greater mobility, protection and firepower of army weapons systems. Nevertheless, as perceived by Salminen, the technology to support the deep operation was expected to emerge not earlier than in the following decade.<sup>605</sup>

The Corps 86 organisation contained an Armoured Cavalry Regiment (ACR). The Regiment was built on an *ad hoc* basis, where additional attack helicopters, field artillery and attack aircraft could be linked up. It provides the corps commander a self-contained force of combined arms and services capable of independent operations and controlling the covering force in its sector. It was designed to provide time for the main body to deploy forward and

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<sup>601</sup> Browne, Edward M.: Status of the Advanced Attack Helicopter. In *Armor*, vol XC, no 4. July - August 1981, pp. 42 - 43.

<sup>602</sup> Hine, Patrick: Concepts of Land/Air Operations in the Central Region: II. In *The Journal of the Royal United Service Institute for Defence Studies*, number 3, vol 129. September 1984, pp. 63 - 65.

<sup>603</sup> Army 86. Force Design, Chapter 4 [referred to 15.04.2002]. Available at <URL:<http://tradoc.monroe.army.mil/historian/pubs/TRADOC25/contents.htm>>.

<sup>604</sup> Lancaster, p. 30 - 31. A Divisional cavalry squadron consisted of 6 scout and 4 attack helicopters. Resources to the NBC reconnaissance would be available. Cavalry brigade (ari attack) would consist of 50 attack, 48 scout, 30 utility, 12 electronic and 6 observation helicopters.

laterally. In the offensive, it would prevent surprise and protect the main body from detection or engagement by the enemy.<sup>606</sup> According to Richard E. Simpkin, the trends adopted in the U.S. Army were not based on the ideas of rapid reaction and on the ability to implement quick and long strategic airlines, but more on the ideas of the “baroque bludgeons”. The concept of light mechanised elements, coupled with the components of the air cavalry at operational level, would make a light mechanised brigade in a 1986 type A Heavy Division a clear-cut military asset in the heavy manoeuvre force setting.<sup>607</sup>

## 6.2 NATO’s Doctrine of Follow-On-Forces Attack

The Allied Army Doctrine of 1981 stated that the Central Region was divided into covering force, main battle and rear areas. Naturally, NATO members were responsible for employing their own battle doctrines in their respective zones and different approaches to planning operations. The Dutch and the Belgians adopted modified versions of area defence. The Germans planned to fight with mobile armoured forces and the Americans would move towards more aggressive Air Land Battle -concept. The British version was a mixture of the Dutch - Belgian and the German versions. Such differences of stabile and mobile orientation created certain instability within NATO, although the incompatibility of the different national forces would have prevented a direct adoption of the American version.<sup>608</sup>

The Follow-On-Forces Attack (FOFA) was approved as NATO’s operational concept on 9th December 1984. It was not to replace the nuclear option but the conventional forces were rather to overcome their deficiencies and exploit promising technological developments. It was claimed that there were many similarities between the FOFA and the Air Land Battle concepts, because both embrace the technologies of surveillance, target-acquisition system and deep-attack weapons. The Supreme Allied Commander Europe (SACEUR), General Bernard W. Rogers, clarified that the concept of FOFA differed from the Air Land Battle doctrine as follows:<sup>609</sup>

- 1 NATO concept is not based on the integrated use of conventional and mass destruction weapons versus the U.S. Army doctrine.

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<sup>605</sup> Salminen, p. 35.

<sup>606</sup> Lancaster, pp. 31 - 32.

<sup>607</sup> Simpkin (1985), p. 41.

<sup>608</sup> Salminen, p. 38.

<sup>609</sup> Coy, p. 135.

- 2 NATO will not engage in pre-emptive strikes.
- 3 NATO will not attack across borders with ground forces, but will counter-attack to restore borders

Central to the NATO doctrine was stopping, paralyzing and destroying the second echelon of the aggressor before it reached the main combat area. In addition, dealing with the Soviet massive air strike capability was considered. Henceforth, any enemy attempts to concentrate overwhelming forces in the main combat area would be rendered ineffective. In the same fashion, it was thought possible to prevent the OMG's from joining the battle.<sup>610</sup> Naturally, it soon became clear that the role of nuclear weapons could not be relinquished. Thus, a delayed deployment of nuclear weapons became the new policy. It was not possible to take the offensive, unless more reserves were obtained and political permission for such an action was guaranteed. As the resources were not to be increased, it was necessary to prune resources from the defensive element and to "select the vital ground more carefully".<sup>611</sup>

Incidentally, as no counterstrokes were to be directed across the inter-German border (IGB), no deep strikes were even planned. Hence, the concept of NATO defence would be divided much like it had been during the earlier decades.

1. Covering force (CF)
2. Main defensive battle
3. Employment of reserves.

The first phase would be fought between the area of inter-German border and the FEBA (6 to 60 kilometres). Bagnall appraised that the probable fate of any immovable dispositions in this area would be under eerie artillery bombardment. Therefore, the size and the role of the covering force should be rearranged. The enemy advance would be halted during the coordinated and mobile main battle. Evidently, it is clear that NATO doctrines were based on tactical level ideas and only by the use of the air-element, this concept would reach the operational level in battlefield. Bagnall estimated that the Soviet troops were to face serious traffic jams and other delays without any interference of NORTHAG forces. Therefore, any countermeasures would be easy to direct against the follow-up echelons. Reserves were to be capable of manoeuvring and cooperating with air forces. Any measures to dislocate Soviet

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<sup>610</sup> Salminen, pp. 38 - 39.

<sup>611</sup> Bagnall (1984), p. 60.

plans and “force them to react to us” would be used. These measures of extending the conventional defence capabilities would similarly raise the nuclear threshold.<sup>612</sup>

It was quite clear that operational countermeasures of at least one division and possibly a corps were needed. Bagnall deliberately weakened the British and German forces assigned to main defensive action and tactical counterstroke abilities to be able to create a powerful army group reserve (three armoured divisions) based in Germany. This reserve would be used in a bold offensive manoeuvre that would throw the enemy’s first echelon off balance and prepare the ground for the counteroffensive against the Soviet second echelon forces. Specifically, the aim was to destroy the operational effectiveness of the enemy’s first echelon, but it was doubtful that these measures would eradicate the threat and bring about a pause in the entire Soviet attack.<sup>613</sup> Deeper and more proper operational level measures were needed to accomplish the desired results. Unfortunately, the resources were inadequate for such demands.

In the latter part of the 1980s, some debates were focused on the FOFA’s adequacy as a theatre defence doctrine. According to Lieutenant Colonel John E. Peters<sup>614</sup>, it was claimed that it degraded deterrence as it was criticized to be even less effective than the earlier Forward Defence. For political and operational reasons, any operations within the areas beyond the IGB made the emphasis on deep attacks obsolete. The value of the FOFA as a means of deterrence was thus criticized by Peters. He saw in the FOFA only ostensible value as an actual deterrent, because there were “no indicators that the Soviets perceive FOFA to be so effective at this as to constitute deterrence by punishment.” No clear deterrence had been shown to prevent *Blitzkrieg* -type operations, either. Finally, the FOFA offered no certainty that an aggressor would ultimately face nuclear fires. Naturally, the FOFA “pushed the nuclear threshold back”. In reality, as the FOFA appeared to be lacking sufficient deterrence it was not the best theatre doctrine for NATO.<sup>615</sup> In addition, Brigadier E. F. G. Burton criticized the NATO’s operational doctrine. He alleged that actually there were no formally declared NATO doctrines even in 1989. The adoption and implementation of a credible

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<sup>612</sup> Bagnall (1984), p. 62; McInnes, p. 64.

<sup>613</sup> McInnes, p. 67.

<sup>614</sup> Peters served in the Office of the Deputy Chief of Staff for Operations and Plans (ODCSOP) in Washington, DC.

<sup>615</sup> Peters, John E.: Evaluating FOFA as a deterrent. In *The Journal of Royal United Service Institute for Defence Studies*, number 4, vol 132. London, December 1987, p. 39 - 43.

operational doctrine would benefit both efficiency and economy, because it would facilitate the problems of interoperability and weapons procurements.<sup>616</sup>

Richard Simpkin had an interesting picture of the NATO centre in Europe in the mid-1980s. He noticed that the NATO army groups' commanders still had nothing to do with the actual conduct of operations. The most they could hope to do was to co-ordinate and support the various national corps battles, each fighting in the way the national army preferred. As the U.S. Army Air Land Battle concept for ground forces was likewise to be limited to a depth of 30 to 50 kilometres, a profound conflict between this concept and the widely propounded "strike deep" concept proclaimed by General Rogers in his capacity as SACEUR occurred. As I am about to mix the idea of the FOFA and Air Land Battle as Simpkin did, it is fair to mention that these concepts were probably meant to be integrated and amalgamated during a major war against the NATO centre. The FOFA concept was based on the old idea of "anvil and hammer", where the hammer was being modified from the Cold War period. Simpkin did not hesitate to suggest the "strike deep" interdiction, though he was sure that the psychological difference to European governments would be one of a kind. An open-minded analysis was needed for defence in depth - not just the depth for the IGF to the Rhine, but the entire depth of defence in Western Europe.<sup>617</sup>

Simpkin presumed that the "operational purpose of interdiction the follow-up forces is to create "windows" between the echelons, into which higher tactical and operational hammer-blows could be launched". Tactical "hammers" would stop and paralyze the first echelon. The operational "hammer", that represented the interface between the two American concepts, would have a direct effect on the strategic situation (for Simpkin's concepts of "anvil and triple hammer defence" see Appendix 11, figure 1). The operation would be carried out by the U.S. Heavy Division 86 with the support of an attack helicopter regiment. This formation would require massive support from long-range artillery and fixed-wing aircraft throughout the operation. This would be equivalent to the Soviet front level OMG. Incidentally, Simpkin evaluated the British armoured division as being too small to implement the mission planned for to the Army 86 structures. This attitude came to be well presented during the Gulf War.<sup>618</sup>

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<sup>616</sup> Burton, E. F. G.: What Measures Should be Taken to Strengthen NATO's Deterrent strategy. In *The British Army and the Operational Level of War*. Edited by J. J. G. Mackenzie and Brian Holden Reid. Biddles Limited, Staff College, 1989, p. 223.

<sup>617</sup> Simpkin (1986), pp. 304, 307 - 309

<sup>618</sup> Simpkin (1986), pp. 304 - 307.

General Sir Martin Farndale, NORTHAG commander since 1985, presented interesting ideas to solve the problem of preventing the pursuit of the follow-on forces (presented in Appendix 11, figure 2). He could enjoy the fruits of Bagnall's success and he had a more united army group in command. What was even more encouraging for the defence capacity was his reliance on the arrival of the powerful III U.S. Corps as a dedicated NORTHAG reserve. This enabled him to consider a much more ambitious use of the "operational level" counterstrokes, aimed in winning the initial and conventional phase of the war. His operational plan consisted of three-stages: the first stage would be broadly similar to the operations envisaged by Bagnall, in which individual corps would fight mobile battles to weaken the Soviet forces. The second phase would be based on the use of newly arrived III U.S. Corps to put into effect an even deeper counterstroke. The last resources, possibly the 1st French Army, would be used during the third phase of the operation to engage the enemy's third operational echelon. If these measures proved inadequate, nuclear weapons would be used.<sup>619</sup> The U.S. Army planned not a pure offensive but rather a counterattack to begin as when the enemy attack began.<sup>620</sup>

Finally, the described combination of the FOFA doctrine with the concept of Forward Defence gave the strategy of flexible response more credibility and added to its deterrent value.<sup>621</sup> Similarities and differences can be found from Simpkin's and Farndale's concepts. Both counted on active initiative and put plenty of resources to any counterattacks to interdict the follow-up echelon of a Warsaw Pact attack. Simpkin seemed to count more on the capability of rotary-wing aircrafts and to smaller number of troops than what Farndale stated. It is obvious that Farndale's thoughts followed more closely the traditional British way in operational thinking by limiting his "operational" counterattack within tactical level frames, although he was ready to extend the thrusts beyond the inter-German border (IGB). The actual line of operations during the second and third phases is somewhat a matter of speculation. Were these "punches" actually meant to be strategic level counter-attacks or same operational level manoeuvres? I estimate that the 2nd and the 3rd phases would be directed beyond the IGB, but probably not as deep as what Simpkin visioned in his own concept. Nevertheless, the idea of striking and influencing all enemy echelons and the measures to subdue the enemy OMG's before they had launched their outflanking manoeuvres were bold and ambitious.<sup>622</sup>

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<sup>619</sup> McInnes, p. 69.

<sup>620</sup> Friedman, p. 129.

<sup>621</sup> Salminen, p. 41.

<sup>622</sup> McInnes, p. 69.

### 6.3 The First British Army Doctrine During the Year 1989

The first operational level thoughts of warfare arose in the Higher Command and Staff Course of the British Army during the late 1980s. One aim was to lay down a fundamental theoretical grounding in the principles of the planning and conduct of war at the operational level.<sup>623</sup> Manoeuvre warfare thoughts, counterstrokes and flexibility of command were some notable features of this course. The main theme of producing operational level ideas within the traditionally tactically oriented British Army was a vast and ambitious challenge. Also the all-arms cooperation and the corps level commanding structure were introduced as subjects of interest.<sup>624</sup>

The process of accepting the operational level doctrine was not completed without awkward phases. One should bear in mind that there was just enough time to absorb the ideas of Active Defence (FM 100-5, 1976) in the late 1970s, when new ideas emerged. A transition, literally from defence to attack, took place. At the same time when the U.S. Army was quickly developing new ideas of future manoeuvre, the British Army dragged along the memories of WW II. The Chief of the General Staff, General Sir Edwin Bramall saw the future trends in tank design leading again to two types of tanks with the present-day heavy MBT lingering on as a sort of divisional tank to attritional battles and to lighter, lower, more agile and cheaper cavalry tanks. He saw the infantry divided into the more static role of fighting attrition battles. The other part would be the armoured infantry of *Panzergranadiers*, who would invariably move with lighter and more mobile tank formations and, if necessary, fight on the move. The flexible all-arms organisations would produce an effective organisation capable of maintaining “infiltration through covered lines of approach”. Bramall foretold that the most important changes of all should be focused on the field of attitude towards equipment.<sup>625</sup> Brigadier Richard E. Simpkin did not make so steep a distinction between the missions given to the infantry and their actual means of transport, because they could be used both in a dismounted positional defence with their vehicles in support and to carry out more aggressive tasks in attack situations.<sup>626</sup>

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<sup>623</sup> Reid (1993), pp. 1 – 2.

<sup>624</sup> McInnes, pp. 71 - 72.

<sup>625</sup> Bramall, Edwin: British Land Forces: The Future. In *The Journal of the Royal United Service Institute for Defence Studies*, vol 127, no 2. London, June 1982, pp. 17 - 22.

<sup>626</sup> Simpkin (1985), p. 41.



“Design for Military Operations: The British Military Doctrine” was established in 1989. The existence of the Rapid Reaction Corps became vital as a focus for staff training and study.<sup>627</sup> As Nigel Bagnall pointed out, the “British Army has for too long had its attentions riveted on the bush fire emergencies of the Empire”.<sup>628</sup> The British Military Doctrine concentrated on the definition of the different levels of war and especially the true position of the operational level. It was defined as concerning the direction of military resources to achieve the objectives of military strategy. Liddell Hart’s ideas seemed to recapture some attention, since military strategy was defined as the application of military resources to achieve grand strategic objectives. The idea of strategic or operational level deep and narrow thrust, like the German advance to the Channel in May 1940, seemed to be abandoned within the British Army. It was thought that any such narrow thrusts would be difficult to sustain because an operational reserve and a favourable air situation could turn the tables and threaten its flank. However, bold ideas of tactical turning movements, envelopments, double envelopments and encirclements were accentuated as valuable courses of action. The idea of Liddell Hart’s expanding torrent was attached to the Russian Oder operation from 12th to 18 January 1945. It demonstrated the still valuable, unavoidable and ruthless operational level breakthrough of superior troops in surroundings much similar to West German conditions.<sup>629</sup>

In addition, the British Military Doctrine was not committed to any certain technological instrument or weapons system. Another question is whether this was a successful conclusion. The new “doctrine” was written in a way that could not lead so clearly to the development of a specific arms technology as it was more focused on the general discoveries of the modern art of war. An even more interesting and visible product of the Higher Command and Staff Course is the book *The British Army and the Operational Level of War*, published in 1989. The subjects of operational level manoeuvre, airmobility, armoured warfare and command and control philosophies at the operational level were examined critically and at the same time constructively. There seemed to be no room for Liddell Hart’s indirect approach or other lower level theories, whereas Fuller’s tactical-operational level armoured warfare ideas were highly esteemed.

Brigadier J. P. Kiszely pointed out that since the British Army had recognized the operational level, it had only moved towards the tactical doctrines of manoeuvre warfare. In the actual adoption of operational level ideas, crucial original solutions at the spur of the moment would

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<sup>627</sup> Strachan, p. 411.

<sup>628</sup> Bagnall, Nigel: Foreword. In *The British Army and the Operational Level of War*. Edited by J. J. G. Mackenzie and Brian Holden Reid. Biddles Limited, Staff College, 1989, p. vii.

be needed, as the emphasis on British traditional to improvisation was no longer valuable at higher levels. The BAOR's last forty-five years of peacetime soldiering often in heavily scripted and controlled displays rather than two-sided battle exercises had inevitably placed small demands on originality or anything above the tactical level of war.<sup>630</sup> As an important element of applying and fulfilling manoeuvre warfare, the British Army officially adopted the originally German-based Directive Control, as opposed to the traditional British method of command by detailed orders.<sup>631</sup>

In his introspective article, Colonel R. A. Oliver was worried about the tradition of set-piece battles in the British Army. The British Army has not gained a reputation for being able to fight a manoeuvre during the twentieth century. Oliver probably referred to the operational level manoeuvres rather than particularly to tactical level, because this level has improved remarkably. Oliver visioned that several years would be needed to put modern doctrinal ideas into effect within the British Army. Especially the ideas of implementing directive control through the army would be extremely troublesome. Actually, he predicted it would take a decade.<sup>632</sup> Colonel P. A. J. Cordingley remarked on the basic facts left unnoticed in the earlier British Army studies that there seemed to be a misunderstanding within the British Army as to the aim of ground operations. The basic discussion spun around the primary aims of destroying the enemy or capturing ground. Since it was discovered that the possibility of accurately defining the objective was awkward, the former remained as the primary aim. The counterstroke was understood to be brilliantly successful in the short-run, but the unavoidable continuation would be another question. There seemed to be two alternatives. Firstly, the counterstroke would be exploited and converted into a full-scale counteroffensive designed to send the enemy reeling back. Secondly, time had to be gained to delay escalation.<sup>633</sup>

Paradoxically the British Army has been quite stiff to take new technology into use. The tanks of the interwar period and the helicopters of the 1980s are examples of this. According to Hew Strachan, the reason lies in the regimental system, where new arms are treated as fresh or junior participants lacking senior representation within the service and posing a potential

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<sup>629</sup> Design for operations – the British military doctrine (1989), pp. 37 – 38, 75 - 81.

<sup>630</sup> Kiszely (1993), p. 41 - 43.

<sup>631</sup> Kiszely (1993), p. 43; Behagg (1993), p. 122. The OODA loop did not favour the British command and control structure. While the U.S. Army division level change of mission typically requires about 18 hours, German 16 hours and the it took 24 hours for the UK division to complete the same performance.

<sup>632</sup> Oliver, R. A.: Training for the Friction of War. In *The British Army and the Operational Level of War*. Edited by J. J. G. Mackenzie and Brian Holden Reid. Biddles Limited, Staff College, 1989, pp. 188, 190.

<sup>633</sup> Cordingley, P. A. J.: Armoured Forces and the Counter Stroke. In *The British Army and the Operational Level of War*. Edited by J. J. G. Mackenzie and Brian Holden Reid. Biddles Limited, Staff College, 1989, p. 98.

threat to existing interests.<sup>634</sup> Percy Hobart expressed similar reflections in 1938, when he criticized the current situation inside the Army: “They’re so conservative of their spurs and swords and regimental traditions... so prone to blame the machine or machinery”.<sup>635</sup> It seems that the development of the British airmobile troops faced the same faith as what occurred to armoured troops. Although helicopters had been used to lift troops in action at Suez in 1956, it was not until 1988 before a permanent brigade intended to take advantage of the helicopters’ revolutionary potential entering the army’s order of battle. Brigadier M.A. Willcocks fretted about the similarities of a slow interwar period mechanisation process and the recent unsatisfactory airmobile experiments.<sup>636</sup> Actually, the change in the art of war from a two-dimensional to a three-dimensional system had merited only few British studies or analyses since the early 1980s.<sup>637</sup>

#### 6.4 The Gulf War - Land Campaign and the Need of Adaptability

“I had the modern British Army, there wasn’t anything else.”

Major General Rupert Smith

The traditional eighteenth and nineteenth century patterns of maintaining and expanding armies during the time of war and reducing them in time of peace had certain similarities with twentieth century military affairs. In 1950, the lack of military urgency had also meant, on the eve of the Korean War, that a couple months should be spent raising the brigade in the UK and preparing it for war. Before the ground attack in the Persian Gulf, an intensive period of training and equipment improvement had been undergone before the American allies were persuaded of their combat reliability.<sup>638</sup> New doctrines of operational level campaigns had not apparently any appreciable role to the training of the BAOR, because they had little practical experience of handling large formations, which has also proven to be one of the

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<sup>634</sup> Strachan, p. 413.

<sup>635</sup> Percy Hobart, while trying to train the armoured regiments of 7th Armoured Division in 1938. Quoted in McInnes, p. 22.

<sup>636</sup> Willcocks, M. A.: *Airmobility and the Armoured Experience*. In *The British Army and the Operational Level of War*. Edited by J. J. G. Mackenzie and Brian Holden Reid. Biddles Limited, Staff College, 1989, p. 114.

<sup>637</sup> Carrington, C. E.: *Land/Air Warfare*. Report of a Seminar held at the RUSI on 3 December 1980. In *Journal of the Royal United Service Institute for Defence Studies*, vol 126, no 2. London, June 1981, p. 15.

<sup>638</sup> McInnes, pp. 85, 88. 90. The deployment of British ground forces to the Gulf was announced on 14 September 1990; Swain (1997), p. 129.

everlasting problems of the British. This fact was based on the training conditions in Germany, and according to preceding doctrines, it was implemented at battlegroup level.<sup>639</sup>

It was in the Persian Gulf where the British Army also faced the same problems as earlier in the twentieth century: a particular lack of preparedness. The result was an *ad hoc* force sent into a theatre of war about which little was known. The British traditional policy of devising plans appropriate to particular crises did not in many respects meet the requirements needed this time, although the British did manage to give some impressive performances in the battlefield.<sup>640</sup> It seems that the BAOR was still prepared to face superior Soviet armoured spearheads in European battleground with small but manoeuvrable battle groups and to perform tactical level counterstrokes. Therefore it is doubtful if there have been any actual needs to adopt the ideas of Air Land Battle. The unpreparedness was perceived to be a result of the British lack of tactical intelligence, which is why the responsibility shifted to American intelligence. This fact limited the role of artillery as a “third fist” during the campaign. In addition, the joint doctrine with the air force was proven unsatisfactory, particularly regarding the cooperation between artillery and close air support.<sup>641</sup>

Actually, the British armoured division was rather “light” in comparison to American “heavy” divisions. The permanent tactical unit is the brigade built out of battalions. The British forces in Germany form a four-division corps (1st, 3rd and 4th Armoured Divisions and 2nd Infantry Division). The special division in the Gulf had only two brigades, one drawn from two armoured divisions. The scarcity of resources was a main reason for this deficit. British troops were formed into a brigade, but it would fight in battle groups built out of the brigades. In the British Army, a normal brigade is semiorganisational and semitactical. In the Gulf, armoured brigades were tactical units, with as many attached divisional troops as needed.<sup>642</sup> The actual spearhead would be based on the battlegroup idea.<sup>643</sup> The patterns of battlegroup mentality practiced for decades had their touchstone - the ideas granted from the North African campaigns. The organisation of the 1st British Armoured division in Persian Gulf is presented in Appendix 12 (figure 1). Originally, only the 7th Armoured Brigade was available in the area. Naturally, the British got anxious about their ability to raise their strength in a short period. The 7th Armoured Brigade was one of the best-equipped forces in

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<sup>639</sup> McInnes, p. 105.

<sup>640</sup> McInnes, p. 112.

<sup>641</sup> McInnes, pp. 103 - 107, 111.

<sup>642</sup> Friedman, p. 281. McInnes, p. 76.

<sup>643</sup> McInnes, p. 87.

the British Army. It had modern Challenger tanks and Warrior AFV's. The fresh elements were mainly based on the 4th Armoured Brigade that had similar primary armament, though only one regiment of Challengers. Finally, the 1st Armoured Division had only half of its initial strength of "teeth" (missing a third brigade), although it had some 33 000 soldiers, over half size of the BAOR's operational strength.<sup>644</sup>

Naturally, the Land Campaign (the major British deployment was called as Operation Granby) was a success to the British Armoured division, resulting in over 7000 Iraqi prisoners and a capture over 400 major pieces of equipment during the advancement of 290 *kilometres* within 66 hours. Nevertheless, the 43-day air campaign with over 2400 combat and support aircraft from 10 countries and over 110 000 flown sorties guaranteed that the amount of casualties in Coalition side was minimal. It was estimated that from a total of 43 divisions (with over 4000 tanks, 3000 artillery pieces and 2800 armoured personnel carriers), a total of 25 Iraqi divisions in the front line had been reduced to less than half at their combat effectiveness and the operational reserve of ten divisions had been seriously hit. Only the *élite* Republican Guard divisions, the main focus of the ground offensive, had largely remained in their combat capability. The Iraqi defence strategy in Kuwait appeared to be heavily influenced by their experiences in the war with Iran in the 1980s. Naturally, against a high technology army these measures proved to be outdated.<sup>645</sup> Strategically and operationally, the Coalition's whole operation had clear features of attrition battles against a developing country's army, even though some bright spots of operational and tactical application of manoeuvre ideas were carried through.

The British were worried about the terrain in which the Marines were preparing to fight, as the rough terrain would render the British armoured brigades unable to fight the far-ranging, fire-and-manoevre tactics in which they had specialized. The British were aware of the planning of a "left hook" against the Iraqi forces, a grand encirclement manoeuvre that would cut off the Iraqi lines of retreat and take on the Iraqi Republican Guard. While this was going on, the job of the Marines would be essentially diversionary, to pin down Iraqi forces on the Kuwait - Saudi border, where their commanders expected the main Coalition's costly attack to develop. The British naturally considered that they should be a part of the main thrust, because their "massive" level of the commitment meant that "we must at least be given a chance to show what our armour could do in an environment which suited it".

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<sup>644</sup> McInnes, pp. 85 - 89; Freedman, Lawrence and Karsh, Efraim: *The Gulf Conflict 1990 - 1991. Diplomacy and War in the New World Order*. Princeton University Press, New Jersey 1993, p. 209.

<sup>645</sup> McInnes, pp. 76 - 79.

According to Professor Lawrence Freedman, the British tried to avoid any unnecessary sacrifice and the “left hook” would resemble Liddell Hart’s indirect approach anyway.<sup>646</sup> Naturally, this comparison to Liddell Hart’s ideas was based on the idea of the use of physical movement and the element of firepower, which is only one element in tactical indirect approach as the adversary’s fighting morale, would finally collapse by sufficient firepower.<sup>647</sup> In fact, a good deal of political activity was required to ensure that the British 1st Armoured Division was moved from the tactical control of the Marines to that of the VII Corps. The VII Corps was, with its two heavy tanks and one mechanized division originally a NATO-based corps in Europe. The Division’s commander Major-General Rupert Smith tried to ensure that the British operation was not carried out “by the book”.<sup>648</sup> The decision to change the tactical control put some pressure on British troops to become familiar with the necessary drills of fighting and moving as a part of a large force.

The plan involved the Arab forces and the U.S. Marines to tie the enemy down, while two U.S. Corps (the XVIII Airborne Corps and the VII Corps) conducted an envelopment movement (see Appendix 12, figure 2). Starting much further west than the Iraqis expected, these two corps would cause surprise and dislocation of the Iraqi troops within the Kuwait territory. The cornerstone of the ground offensive was to destroy Hussein’s *élite* troops, the Republican Guard and cutting off important communication lines behind the Kuwait occupiers. Huge deception plans were made to convince the Iraqi that the main thrust was to be performed directly, without any outflanking movement. This time these measures had a significant role, contrary to the operation of El Alamein. In addition, the threat of a marine landing from the Gulf into Kuwait was maintained right to the end of the conflict. The VIII Corps’s aim was to destroy the Republican Guard “at minimum cost to friendly forces”. There were two big U.S. heavy divisions, one infantry division and the 1st British Armoured division. The infantry division would breach the Iraqi lines while two U.S. Armoured Cavalry Regiments would lead the U.S. heavy divisions round and through the created gap. The main role of the British Division was to provide flank protection for this deep strategic thrust into Iraq and to deal with the Iraqi tactical reserves on the right flank.<sup>649</sup>

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<sup>646</sup> Freedman (1997).

<sup>647</sup> McInnes, p. 90.

<sup>648</sup> McInnes, p. 92.

<sup>649</sup> McInnes, pp. 82 - 83, 95; see also: Lawrence and Karsh, pp. 301, 386.

The plan was based mainly on the Air Land Battle doctrine with the integrating battlefield concept where the deep (interdiction) battle, close battle and rear areas were harmonised into a single coherent plan at the operational level. The 1st British Armoured Division was assigned to the U.S. VII Corps plan. It envisaged a “continuous, swift and violent air-land attack to destroy the Iraqi Republican Guard”. The British division was a flank guard to two heavy U.S. Armoured Divisions.<sup>650</sup> I found many similarities both to Simpkin’s and Farndale’s concepts (Appendix 11), as there would be separate forces for fixing and punching. Liddell Hart presented much the same concept in his Man-in-the-Dark -theory. The Joint Coalition Forces and U.S. Marines would form the fixing troops. The British 1st Armoured Division’s original role was to fight in a corps mobile battle as a “lower tactical hammer” within the fixing forces. After being connected to the VII Corps plan, it participated in the higher tactical operation of punching forces. The actual operational (according to Simpkin) hammer would be the XVIII Airborne Corps attacking the rear areas of Iraqi troops. Naturally, both Simpkin’s and Farndale’s concepts were designed to be used against an aggressive invader and the actual task for different “hammers” was directed to paralyze the enemy’s follow-up echelons and therefore the whole operation looked like a sort of “drill bit”, as mentioded by George Spiller.<sup>651</sup>

Some stress was put on the cooperation between logistic elements and the actual combat troops. Unfortunately, the British Armoured division did not have sufficient time to practice as a whole. Neither had the logistic elements exercised with the forward combat echelons, nor had the artillery element had the possibility to take part in these exercises because of their early commitment to the preliminary bombardment of Iraqi positions.<sup>652</sup> In addition, the logistic system of the BAOR had been forced away from robust unit self-reliance to a fragile system long ago. Therefore, it had been realized that the overall ability of logistic units to fight a mobile battle was subsequently weakened, as the Cold War ideas had been emphasizing delay operations in the European theatre where logistic distances would be shortening as the troops retreated. Consequently, the attack and constant moving forward in the Gulf caused much trouble.<sup>653</sup> The two brigades required almost a corps’ worth of support, while adequate transport was lacking in both number and quality.<sup>654</sup> The British Army’s equipment proved short of the standards set by the Americans. An even more disquieting

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<sup>650</sup> McInnes, p. 82 – 83.

<sup>651</sup> Spiller, p. xxvii.

<sup>652</sup> McInnes, pp. 91 - 92.

<sup>653</sup> Gilbertson, M. A.: Development of Logistics in the British Army. In *The British Army and the Operational Level of War*. Edited by J. J. G. Mackenzie and Brian Holden Reid. Biddles Limited, Staff College, 1989, p. 86.

<sup>654</sup> McInnes, p. 107.

feature was the inability of the logistic arrangements to face the conditions of modern manoeuvre warfare. On the other hand, the used *ad hoc* basis organisation was similarly inconvenient to the high tempo of Air Land Battle.

The British role in a ground campaign was almost a complete success, even though the British division lacked strenght in its “teeth”. During the first days of the manoeuvre some problems of “precision and sincronization” occured in the VII Corps’ advance. Also, the British division faced trouble in trying to manage to penetrate the breach and attack the Iraqi tactical reserves.<sup>655</sup> The later parts of the operation are presented in Appendix 12 (figure 3). The axis of movement of British armoured brigades during the operation is presented in figure 4 in the same appendix. Colin McInnes is praising Major-General Smith’s thinking to reveal clearly the Bagnall reforms in seizing the initiative, using manoeuvre to overcome numerical inferiority and adopting flexibility in command style rather than a pre-determined plan. As a result of not having any reserves, Smith decided to commit the two available brigades sequentially so that the brigade not fighting could be used as a reserve to reinforce an unexpected success or failure. Therefore, the final axis of operation was based on the series of small battles rather than a few big ones. In addition, the whole operation would be performed without a loss of tempo. McInness separated this operation from the traditional, attrition-based British style.<sup>656</sup>

Although armoured brigades had freedom of action during the operation, limited aims and the lack of any deeper armoured thrusts prevented the realization of Liddell Hart’s interwar ideas and Martel’s demands of armoured thrust during the 1950s. The operation of the British Armoured Division typified the ideas of firepower and methodical movement, since the method was to destroy enemy forces by very limited and cautious objectives. Naturally, deep thrusts would not have been suitable, because it would have endangered the methodical advance of other Coalition troops. Robert Leonhart claims that the true nature of the American way in handling different levels of command is closer to detailed than to directive control. He served in an infantry battalion and saw “no freedom for small unit commanders to take any decisions regarding battlefield maneouvre. Commanders were told when to shoot and when to cease-fire. Above all, they were warned to keep their flanks tied in with friendly units.”<sup>657</sup> These conclusions are based on the tactical observation and ought not to be

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<sup>655</sup> Swain (1997), pp. 236 - 247. The British intended to break out of the breach head at 1500 hours on 25th and begin to fight their way through the Iraqi divisions. The passage, however, lasted until about 0200 hours into the morning of 26th.

<sup>656</sup> McInnes, pp. 95 - 96.

<sup>657</sup> Leonhart (1993), p. 47.



generalized to operational level of fighting. It is axiomatic that such control should exist to be able to coordinate such an immense operation. It was not a German narrow thrust or “Sherman’s march”, but a well-organised methodical assault where movement and firepower were set in harmony, as “movement does not win battles unless it is used as a means of delivering firepower”. Actually, Liddell Hart and Fuller presented this idea in 1920 when considering the tactical ideas. Nevertheless, the tactical ability to act in a flexible manner was perhaps the most important lesson learned, as it was as much an attitude of mind as a physical capacity.<sup>658</sup> The ghost of Fullers “firepower-oriented way of thinking” seemed to have maintained its position, as the idea of destroying the enemy’s combat power with the mass of firepower in a decisive point seemed to have tightened its grip.

## 6.5 Manoeuvre Warfare Ideas and the Weight of History

“The first step must always be to wear down the enemy’s power of resistance and to continue to do so until he is weakened that he will be unable to withstand a decisive blow; then with all one’s forces to deliver the decisive blow and finally to reap the fruits of victory.”

Field Marshal Haig after WW I

Nuclear weapons guided the organisational development in most of the postwar decades. The need of controlled dispersion and lightning concentration reduced the administrative “tail”, but as a whole the need for any operational level movement in the battlefield was limited to tactical counterattacks. The measures of fine-tuning the organisation had produced more flexibility and new methods to dispersion, but only in the tactical sphere. Since the hard battlefield conditions of both World Wars, British troops had lacked the ability of breakthrough or pursuit operations. I would conclude that the concentration on break-in operations and counterattacks to prevent any enemy breakthroughs during most of Cold War era verified the old penchant for minor tactics. The era of tactical nuclear weapons confirmed also the trend of battlegroup tactics, well presented during the North African campaigns. Similarly, the idea of fighting active delaying actions suited these types of organisations. The concept of armoured division and high tempo did not suit this “traditional” British practice of decades. It would have taken much more time to grow accustomed to new manoeuvre ideas implemented during Gulf War.

The lack of operational requirements in the process of adapting the manoeuvre warfare theories played a central role in the interwar period and during the first decades of the Cold War. In the 1980s, when the Cold War approached its end, a repetition of the concepts of

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<sup>658</sup> McInnes, pp. 103 - 107, 111.

mechanised warfare ideas was demonstrated. NATO and the U.S. Army's adaptations of earlier innovations of manoeuvre warfare during the 1980s are significant, but on no account revolutionary. It seems that the "new" doctrine was a combination of traditional Anglo-American attrition-oriented strategy combined with closer cooperation with services and the co-ordinated and rapid movement of the ground forces. It is evident that the element of firepower had maintained its central role in operational level planning. Some ideas of Liddell Hart's strategy of indirect approach can be detected, as the psychological dislocation of the Iraqi Army was attempted.

Professor Lawrence Freedman made comparisons between the land campaigns of 1916 and 1991. He found differences between these two campaigns, but also some parallels. He argued that in Somme and the Gulf the defending forces were well dug in and hoping to trap their opponents in a killing zone. In both cases the attacking sides sought to demoralise and disrupt the defence by subjecting it to intense bombardment prior to a land assault.<sup>659</sup> Since the final objective was to crush the fighting capacity of the Iraqi Army, there were clear features to link this situation to WW I and WW II conditions. Especially the set-piece patterns of the battle of El Alamein highly resemble the actual implementation of the ground offensive in the Persian Gulf.

Admittedly, historical comparability can be dubious or even misleading. Therefore, I would rather make comparisons of more similar environmental circumstances. Hence, I compare the Gulf operations to campaigns fought in North Africa during the early years of WW II, which share a surprising number of similarities beginning with the enormous dimensions of the desert as a battlefield in proportion to the troops available. The flanks were markedly more open in desert conditions than what they were in the European battlefield during both World Wars. Naturally, the lack of natural objects was not to channel manoeuvres like in Europe. Secondly, the Iraqi troops failed to take account of the impact of fast moving Coalition armoured forces just like the Italian troops failed to respond to the attacks of the British armoured forces during the battles of North Africa. Some similarities can be detected between the Coalition plan and the German operation during the Battle of Alam Halfa (Appendix 12, figure 2 and Appendix 5, figure 3). Naturally, the enormous dimensions of the Gulf War versus the North African campaign are not comparable, but neither are the different technologies. The outflanking movement was thus bold on both occasions, although the balances of power in air supremacy and in land forces were not favourable to the Axis during the operation.

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<sup>659</sup> Freedman (1997).

The Coalition did manage to coordinate a successful operational level-flanking manoeuvre, but this was mainly due to the victorious and superior capacity of the U.S. Army and Air Forces. Naturally, the British were unable to fight at operational level, because only one division was deployed. Nevertheless, they were able to fight as part of a force working at the operational level, as no other solutions were possible in practice, although there were signs of the “negative” attrition strategy as the operation relied heavily on firepower to wear down the defence. It is not merely the artillery that is characteristic of attrition strategy, but tank and airplanes as well, as long as the emphasis is on firepower in lieu of manoeuvre. Colin McInnes pointed out that both the British and the American doctrine emphasised that manoeuvre was more than physical mobility: it involved mental agility and quick decision-making ability.<sup>660</sup> This raises doubts against the whole idea of manoeuvre warfare and the actual connection to its true descent of the pioneers of armoured warfare. I would not like to tie the original ideas of armoured warfare to a separate category and comprehend its modern implications as unconnected with their historical roots.

## 7 Conclusions: Manoeuvre Warfare Theories and the British Way in Warfare

“‘War is part of life’. We would be foolish to believe that doctrinal debate is a matter of academic interest only.”

A. S. H. Irwin, 1993.

Perhaps the most obvious difference between the military thought of Fuller and Liddell Hart was their ideas concerning the final function of the armed forces in achieving the decisive results over the adversary and how to create enough chaos to devastate the enemy’s morale. Fuller tried to win the campaign through a decisive and direct approach in a more traditional British way. This idea evolved from the battle of Cambrai and achieved its goal in the likeness of the “Plan 1919”. This plan aimed to paralyse the enemy’s headquarters, artillery positions and lines of command and communication, just as it was considered in the British Army during the 1930s. Fuller had several successors and his ideas were highly rated ever since the 1920s. He offered an operational-tactical level battle winning formula that Liddell Hart could not present him, being more interested in strategic level challenges and abstract thought.

Liddell Hart’s approach of defeating the enemy was overall quite different from Fuller’s. Evidently, the indirect approach was intended to be a way of thinking for any levels of war,

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<sup>660</sup> Mearsheimer, p. 34.

but more accentuatedly to be used in strategic and grand strategic level. Naturally, the tactical guidelines to direct the efforts for selective destruction of the adversary's "weak spots", such as supply lines and command posts, is a clear indication to "break away" from the shackles of attrition warfare patterns. Any instructions for avoiding engaging superior forces are similarly clear indicators of a better understanding of the basic ideas of the economy of force in Liddell Hart's "thesis". He saw any attempts of gaining higher than tactical level surprises without genuine originality and flexibility as wasted, as was dramatically seen during the operation Market-Garden. In addition, the German operation in France in the summer of 1940 was original. Forces were needed to direct sufficient killing potential against the enemy's Achilles heel to reach and to suppress the achieved goal. Liddell Hart considered that the psychological dislocation of enemy military and political opinion-leaders was the shortest way to final and decisive victory. A sufficient amount of firepower and manoeuvrable forces were needed to reach any tactical (and operational) objectives. Therefore, Liddell Hart appreciated "Sherman's march" to be as valuable in the mechanized era as it had been during previous eras.

The conceptual problems between tactics and strategy in the British Army were obvious during the interwar period. The lack of operational level consideration had caused considerable nuisance when the use of armoured forces during WW II was planned. This trouble continued during the late Cold War period. I agree with Colin McInnes's ideas attached to the British Way in Warfare, as there are clear indicators confirming these features. In addition, the lack of formal doctrine and a clear focusing on the tactical level of war were characteristics of British military thought during the whole period of my interest. The Army did plan for future wars, but lacked a formal doctrine accepted throughout. The destruction of the enemy army fitted better the tactical and perhaps operational frames, but it alone was unsuitable for reaching any true strategic or political aims. In the British and in the American way in warfare the preference for emphasizing firepower in lieu of manoeuvre has been evident in tactical and operational levels of war. Therefore, the British Army had never had the edge over its adversaries at operational or strategic levels of fighting, as WW II and the Gulf War had showed. Naturally, the Italian troops (in WW II) and Iraqi defenders (in the Gulf War) were both undertrained and under-equipped to be able to repel superior tactical level aggressions.

The British Army has demonstrated an incredible ability to stagger to its feet repeatedly as well as adaptability through constant change. The absence of formal doctrine did not prevent it from achieving success at the tactical level during WW II, although the comprehensive

ideas of treating the whole theatre of war seemed to be neglected. The British plunged into both world wars quite unprepared, but finally they managed to improvise and turn the ratios in favour to them. This success was owing to the well-trained and equipped professional army that had been amalgamated with a large reserve army. The performance implemented by the 1st Armoured Division during the Gulf War is another good example of a tactically oriented army's swift change to an instrument of operational level assault. Naturally, the experimental work done to produce an armoured force in the late 1920s, and especially Brigadier C. Broad's booklet "Mechanised and Armoured Formations", was an important turning point in developing armoured troops and providing the foundations to the ideas of the postwar period.

The Regimental system had certain disadvantages because it encouraged a nonchalant attitude towards cooperation and even towards training between the arms in general. It also hindered the development of inter-service cooperation. The system had its advantages as well. The *esprit de corps* of these regiments was at any rate unique. Therefore, it suited to the role of imperial policing and minor tactics between the 1920s and 1980s. It is reasonable to allege that the British Army emphasized the tactical spheres of the battlefield more intensively than the strategic spheres. This prevalence would be a natural continuation of the general British regimental thoughts.

The actual organisational patterns concerning the armoured forces during the twentieth century do not correlate with the use of original and ambitious ideas. Therefore the use of armoured forces to reach more than tactical level aims seemed to be a more important "denominator" in the equation. It is still interesting that the organisation of the Experimental Force and especially the proposition made by the War Office in 1927 were in many respects similar to the Armoured Division of the early 1940s. In addition, there were many similarities to the ideas of Cold War organisational development. Thus, the Germans were able to use highly sophisticated and original thoughts to reach decisive points or other valuable areas than the Anglo-French adversaries. The seeds of the future operational level armoured division were sown during the 1920s, although the process of mechanisation was not favourable to operational level armoured troops during the early 1930s. The basic idea of how to use and fight with the armoured brigade was practically ready when urgently needed. Although the British Army lacked any operational level ideas of warfare during the interwar years, the tactical level applications noticeably flourished. Therefore, it is fair to say that the work done during the 1920s and the early 1930s was not wasted.

The concept of limited liability has considerable value when evaluating British military policy and army development during the whole twentieth century, even though it is not very constructive or scientific to incorporate the policy of limited liability to the unwillingness of adopting new methods and technology. The British ability to mount a modern armed force for the use of a Continental war has been considered insufficient, because of the lacking resources. During the interwar period and through the first decades of the Cold War era the Army's first duty was to the Empire. The Clausewitzian perception that "political attitudes, priorities and constraints exert a dominating influence on the development of armed forces and strategic doctrines"<sup>661</sup> was itself an explanation of the British interwar problems and army renewal programs. On the eve of the Gulf War, the British contribution to the Coalition was limited to one armoured brigade but after a clear extension of the Coalition army they finally ended up in forming an armoured division. It is impossible to evaluate the fighting capacity of a three brigade division as only two were formed. To me the organisation of the 1st British Armoured Division symbolized traditional Anglo-American emphasis on sustained firepower and tactical movement with the intention of causing shocks, as it was heavily supported by artillery pieces and logistics units.

There are clear indicators that the British Army followed the main lines of tactical development guided by the Americans. The adaptation commenced from the appearance of tactical nuclear weapons and finally flourished around the doctrine of Air Land Battle. Naturally, the fresh element of rotary wings was vital in the organisations. Nevertheless, the rough guidelines to doctrinal and to organisational development had been adopted from the interwar armoured ideas. Neither was there any originality in seizing the initiative. Manoeuvre and the right mental approach to these ideas had been produced during the interwar period and during the ruthless campaign of North Africa during WW II. Moreover, the actual importance of the reforms of 1980s was the reuse and the combination of historical ideas with modern technology. Paul Dyster has alleged that army doctrines and weapons correlate inherently.<sup>662</sup> The importance of technological innovations is thus important to any adaptations in the field of the art of war. General Sherman used the same technology as his adversaries and still he managed to subdue them. The German armoured divisions' outmanouvred their superior foes, although their technological preparedness was at a lower level. The German *Blitzkrieg* is not a theory or even a doctrine. It was simply an application of existing resources, the German application of the art of war, close cooperation between arms and services with a clear military strategic objective. Both Sherman's and the Germans'

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<sup>661</sup> Bond - Alexander, p. 623.

<sup>662</sup> Dyster, p. 10.

applications had more pronounced military and political objectives than what their contemporary adversaries were able to produce (see Appendix 4). The overwhelming tempo was a product of the same technological apparatuses as used by their opponents. Therefore, the originality of the variable methods is the most important issue. The decrease of the value of armoured vehicles during the latter part of the twentieth century is therefore more intertwined with the decline of tactical and operational ideas than with technological matters.

Robert R. Leonhart<sup>663</sup> claims that operational art does not exist in U.S. Army doctrine even today, although the Army has done much research in manoeuvre warfare during the last two decades. According to Leonhart, U.S. Army doctrine is still based more on strategic and tactical doctrines, because the army knows little about manoeuvre warfare.<sup>664</sup> Naturally, if the American application of manoeuvre warfare is compared to the German one, differences are found easily. Besides, the German application was based on different technology. I would not reproach the Air Land Battle doctrine for a lack of originality, because the Americans applied the methods of manoeuvre warfare in the framework of their own military thoughts and traditions. Besides, the U.S. Army began its adoption of manoeuvre warfare in the 1970s and therefore it had plenty of time to modify its institutional culture to respond to the demands of flexible command and control in frames of directive control (*Auftragstaktik*).<sup>665</sup> Anyway, there is no reason to doubt the leading position of the U.S. Army's organisational and particularly tactical and operational considerations to the British Army during the Cold War era, even if there was considerable British tactical practice to be transferred in the opposite direction. The British Army adopted the doctrine of Active Defence (FM 100-5, 1976) in the late 1970s and seemed to be more profoundly absorbed with tactical level battlegroup ideas during the 1980s. The swift to more operational level and offensive-based concepts caused a total alteration of the existing patterns. It seems that the British armoured divisions were intended to be used as part of a tactical level "anvil" to stop the advancing Warsaw Pact's first echelon during the 1980s. Therefore, the British divisions would manage excellently with their existing fighting orders and their "special" tactical skills. The need to adopt new Air Land -based doctrine was not topical.

The collapse of the Warsaw Pact and the withdrawal of Soviet troops from Central Europe changed the whole purpose of the FOFA and Air Land Battle concepts, which had to to be

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<sup>663</sup> Robert R. Leonhart worked as a combat developer for the army. His area of interest was particularly the infantry force of the future.

<sup>664</sup> Leonhart, Robert R.: *The Art of Maneuver. Maneuver-Warfare Theory and Air Land Battle*. Novato, CA 1991, pp. x, 25.

<sup>665</sup> Lind, pp. 10 - 15.

reappraised. Also the concept of Forward Defence and the strong forward presence lost their meaning.<sup>666</sup> As a result of this dramatic change, TRADOC in Fort Knox is focusing on its responsibilities of forming and training the Army's first "medium weight" force known now as the "Brigade Combat Team".<sup>667</sup> It seems that Liddell Hart's consideration of the small, effective, professional and brigade-based armies capable of strategic level manoeuvres is not out of date. New methods for reaching psychological dislocation will be discovered, and when the methods of initial originality are added to this equation, the result might be even more devastating, compared to what we have been witnessing recently and through the last decades.

The element of manoeuvre will beyond doubt preserve its essential meaning in the future thoughts on the conduct of war and especially in any activity provided by armed forces. In addition, the concept of indirect approach will definitely blaze new trails in the future. The information society conceals now and very probable in the future certain "Achilles heels" which could be open to any obstruction without the actual use of force. Hence, it is more important to understand the interaction and tempo between psychological dislocation and the psychical movement in its modern environment, than the interaction between psychical movement and firepower. Naturally, this presupposes that armies will actively envisage the future battlefield and not exclusively concentrate on winning past wars. They should be preparing for future challenges, with their innovative applications of available instruments – preferably before their enemies seize this opportunity.

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<sup>666</sup> Salminen, p. 44.

<sup>667</sup> Bell, B. B: Transforming the Army: Brigade Combat Teams. What It Means to the Armor Force? [referred to 20.1.2002]. Available at <URL<http://knox-www.army.mil/>>. According to Bell's article, Fort Knox is focusing their responsibilities on forming, training, and fielding the Army's first "medium weight" force known now as the "Brigade Combat Team" which will be fielded at Fort Lewis, DC. TRADOC is providing the leadership for the Brigade's ongoing development while the U.S. Army Infantry Center has overall progency.



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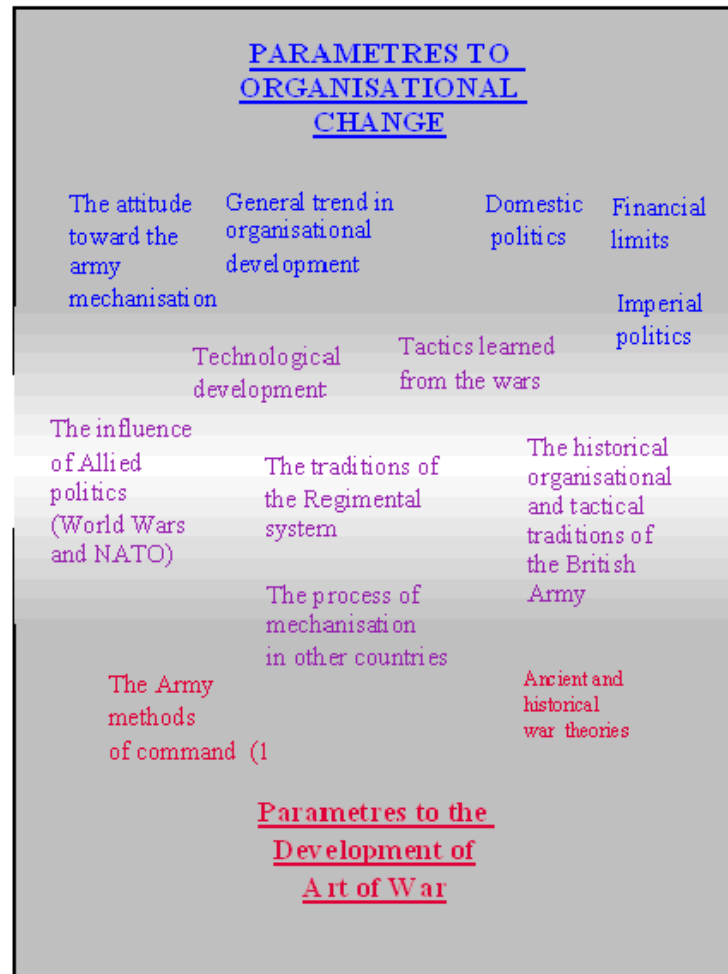
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**AFFECTING PARAMETRES TO THE BRITISH ARMY  
ORGANISATIONS AND THE ART OF WAR**

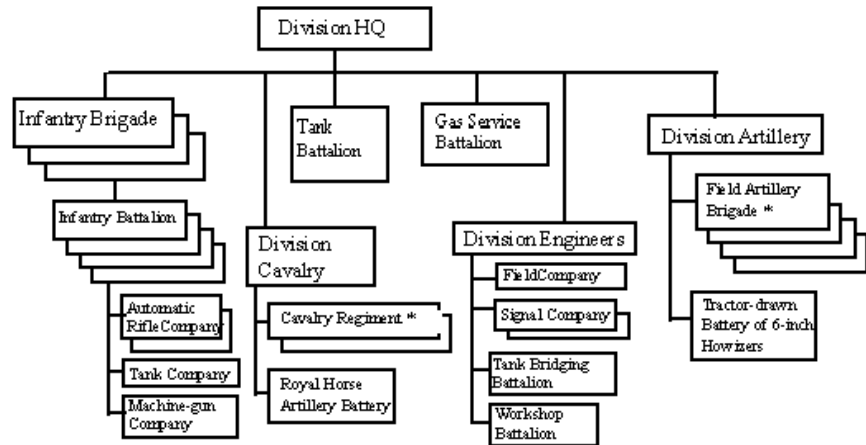


1) Methods of command are divided into mission tactics (Auftragstaktik) and to command by described order (Befehlstaktik)

Source: Uhle-Wettler, pp. 236, 242.

**THE COMPARISON OF LIDDELL HART'S AND FULLER'S NEW MODEL DIVISIONS**

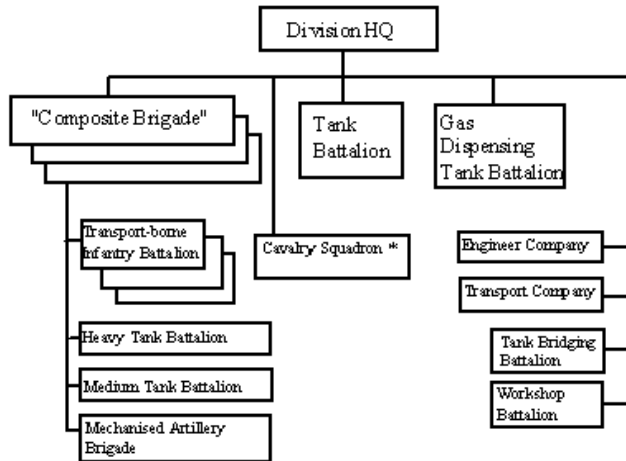
**Table 1: Fuller's model of division (1919)**



Sources: J. F. C. Fuller: *The Application of recent Developments in Mechanics and Other Scientific Knowledge to Preparation and Training for Future War on Land* JRUSI 65, May 1920, p. 263. Quoted in Winton, appendix 5.

NOTES: Artillery brigades and cavalry regiments are the approximate equivalent of infantry battalions.

**Table 2: Liddell Hart's new model of division (1922)**



Sources: B. H. Liddell Hart: *New Model Army: Suggestions on a Progressive but Gradual Mechanicalisation* AQ9, October 1924, p. 43. Quoted in Winton, appendix 6

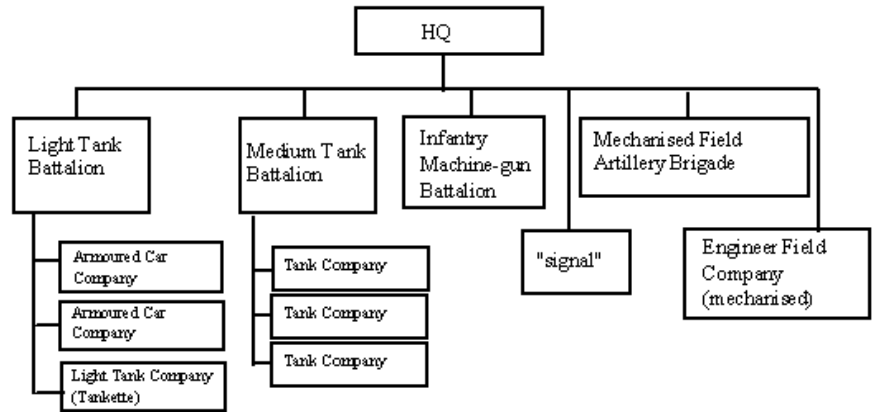
NOTES:

- A Cavalry squadron is the approximate equivalent of an infantry company.
- Tank strength would be around 300 pieces (Dyster, p. 158).



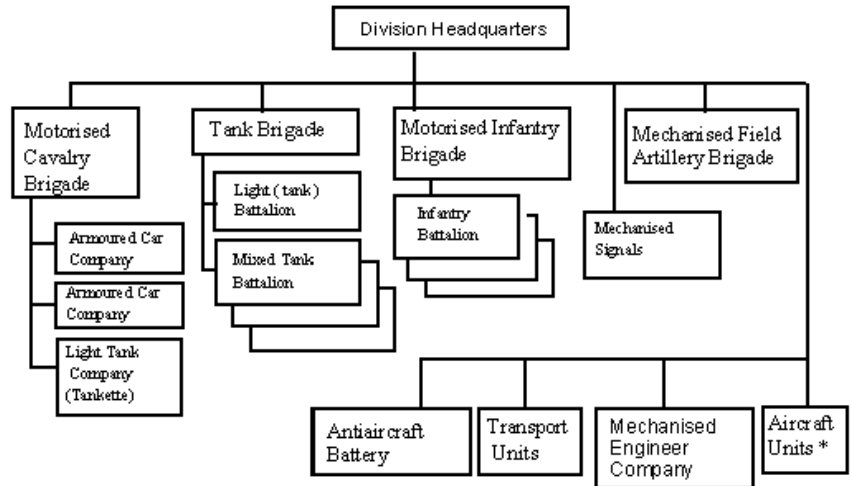
THE EXPERIMENTS FOR THE ORGANISATION OF ARMoured DIVISION

Table 1: The Experimental Force in 1927 - 1928 (later Armoured Force)



Sources: B. H. Liddell Hart: The Tanks, 2 vols, I:247. Quoted in Winton, Appendix 7.

Table 2: Brigadier George Lindsay's Proposal for the Organisation of Mobile Division (1934)

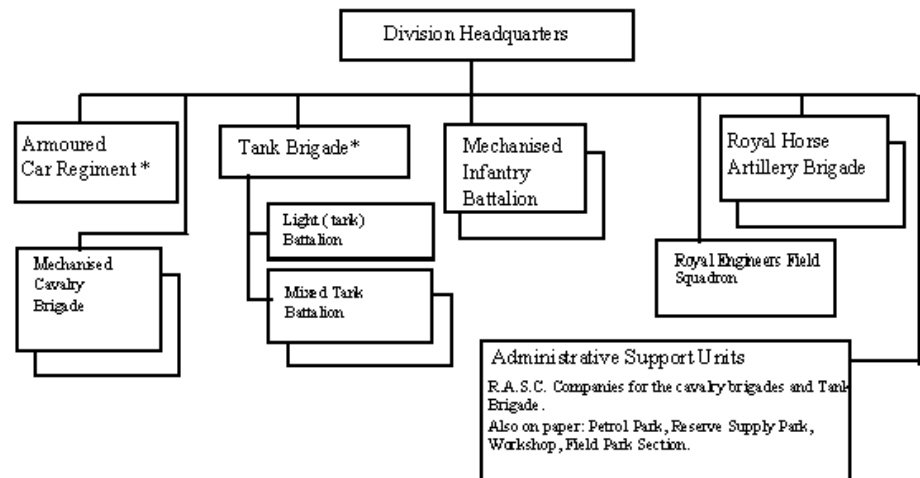


Sources: Brigadier G. Lindsay: Suggested Composition of the Mobile Division. A letter to C.I.G.S. General Sir Archibald Montgomery-Massingberd, February 1934. Quoted in Winton, p. 179, Appendix 9.

NOTES:

\* The Aircraft Units were to be "specially trained to work with the division, capable if need be of transporting supplies by air".

Table 3: The Mobile Division (1937)



Sources: War Office letter 20/General/5512 (S.D.2), 10 December 1937, W.O. 32/2826, The Mobile Division: Cavalry Mechanisation, appendix A. Quoted in Winton, p. 184, Appendix 11; Dyster, p. 190.

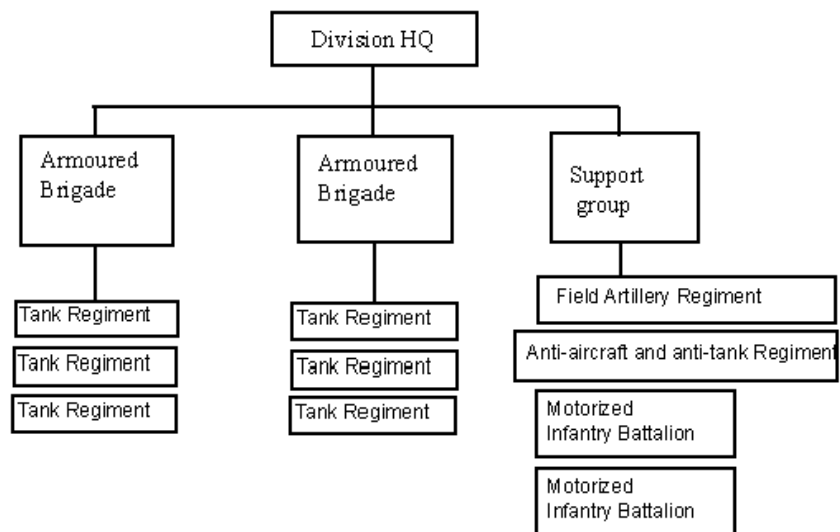
## NOTES:

\* Tank Brigade was the existing organisation. Light Battalion was sent to Egypt in 1938.

\* Armoured Car Regiment was attached to Mobile Division for training purposes.

\* The total number of tanks was about 600 (most of which were light)

Table 4: The Armoured Division (early 1940)



Sources: Jackson, p. 15; Åkerman, p. 68; Dyster, p. 190; Liddell Hart (1950), p. 275.

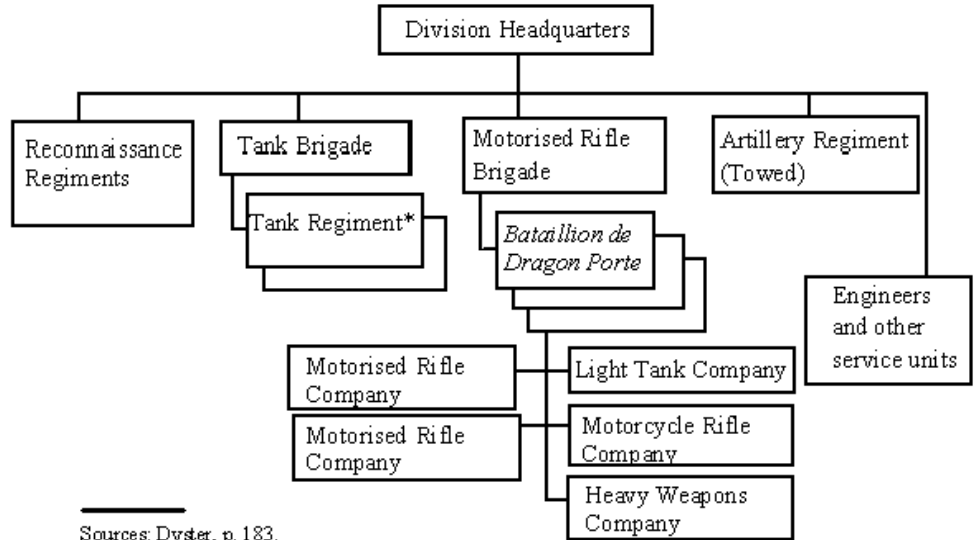
## NOTES:

-The one division in Egypt contained only two tank regiments. After the French campaign in 1940 the infantry battalions were practically added to armoured brigades.

- The size of a Royal Tank Regiment was equal to a tank battalion (30 vehicles). The total amount of tanks was 321, including 108 light tanks.

- The number of infantry battalions was raised to three by the autumn of 1940.

**Table 5: The French Division Légère Mécanique (end of the 1930s)**

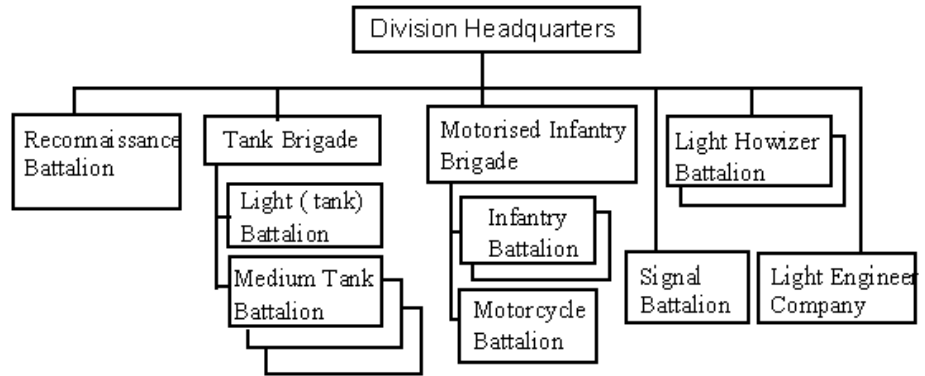


Sources: Dyster, p. 183.

Notes:

- Tank Regiment had 80 tanks.

**Table 6: Heinz Guderian's idea of Armoured Division (middle of the 1930s)**

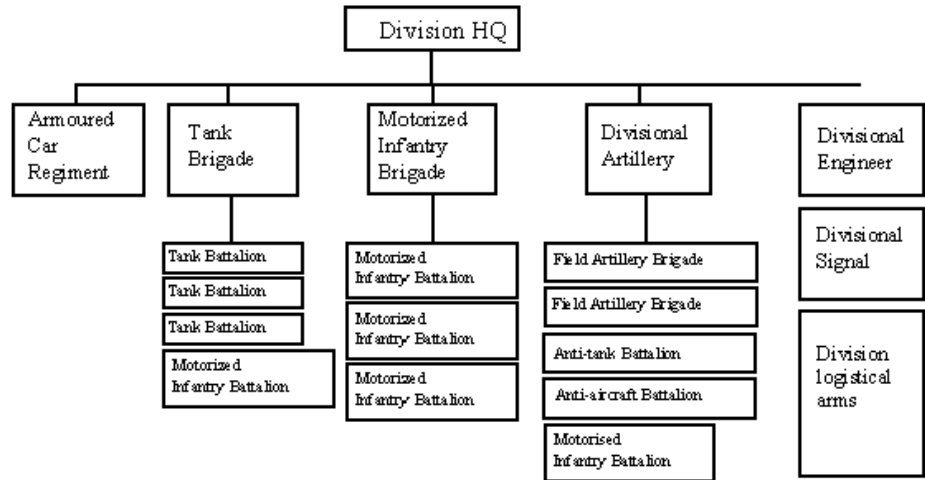


Sources: Messenger, p. 91; Heinz Guderian: The Panzer Leader, p. 24. Quoted in Messenger, p. 91.

Notes:

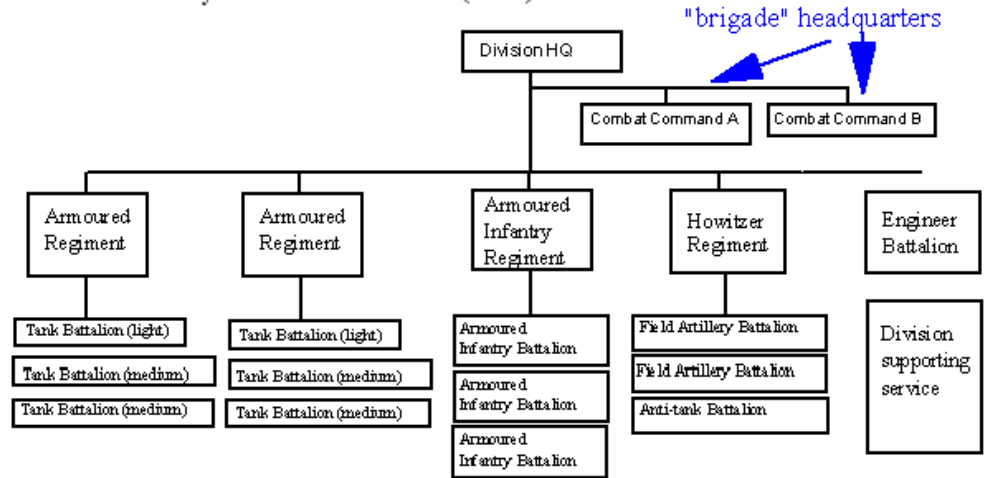
-Guderian envisioned that the infantry, artillery and other divisional arms were to follow the tanks across country. Armoured half-tracks, armoured self-propelled guns for the artillery and the anti-tank battalions and various types of tanks for the reconnaissance and signal battalions.

Table 7: British Army armoured division (1942)



Sources: Åkerman, p. 68; Handbook on the British Army 1943, pp. 42 - 43.

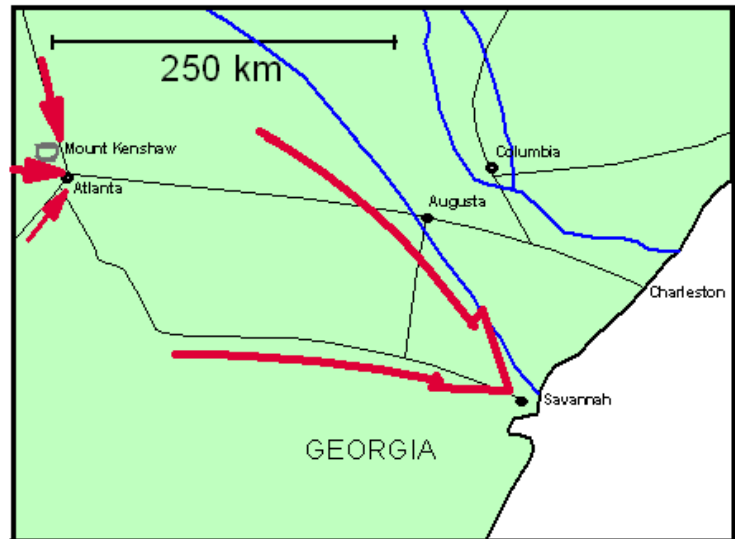
Table 8: U. S. Army armoured division (1942)



Sources: Messenger (1976), p. 222.

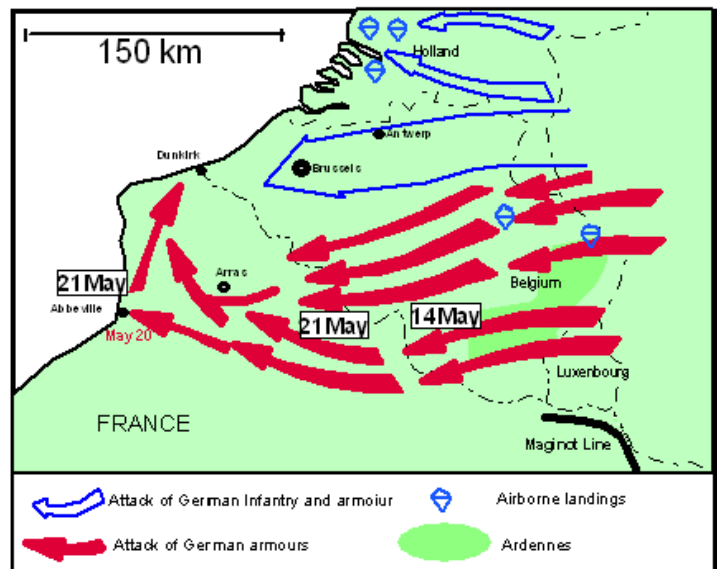
TWO APPLICATIONS OF LIDDELL HART'S INDIRECT APPROACH

Figure 1: "General Sherman's march", 1864



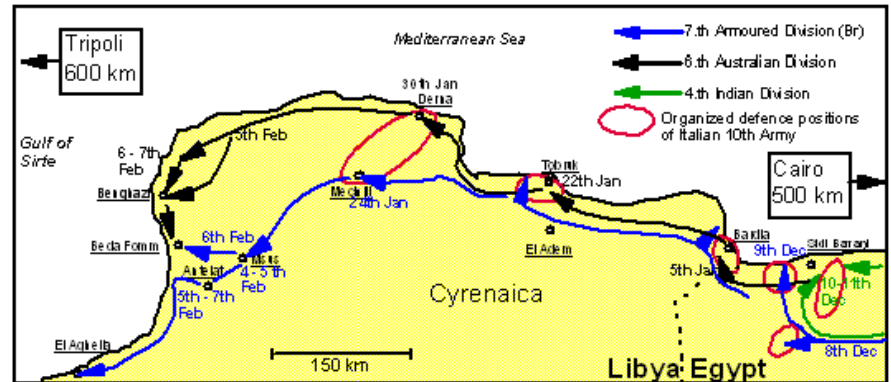
Sources: Liddell Hart (1954), pp. 151 - 153. In the Atlanta campaign Sherman had only a single geographical objective. Later he took a line of advance which kept the Confederates in doubt what his final objective was (Augusta or Charleston). His troops moved on a wide and irregular front- with several columns, if one was blocked, others would be pushing on.

Figure 2: German Blitzkrieg, 1940



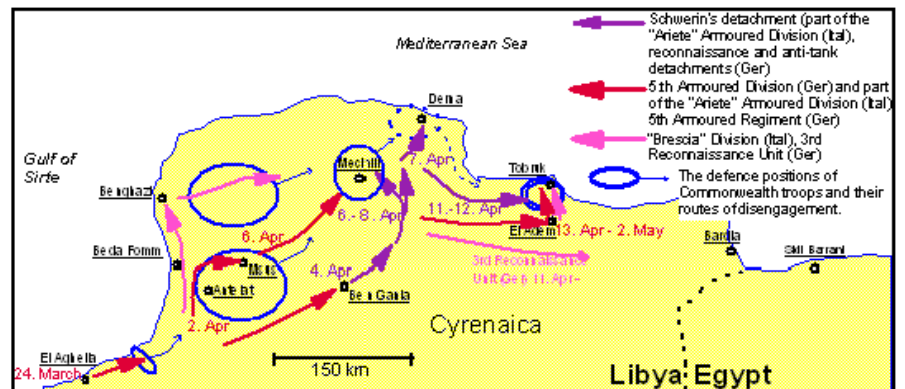
DIFFERENT ADAPTATIONS OF MANOEUVRE WARFARE THEORIES  
IN NORTH AFRICA FROM THE LATE 1940S UNTIL THE LATE 1942

Map 1: British attack in Cyrenaica from late 1940 until early 1941



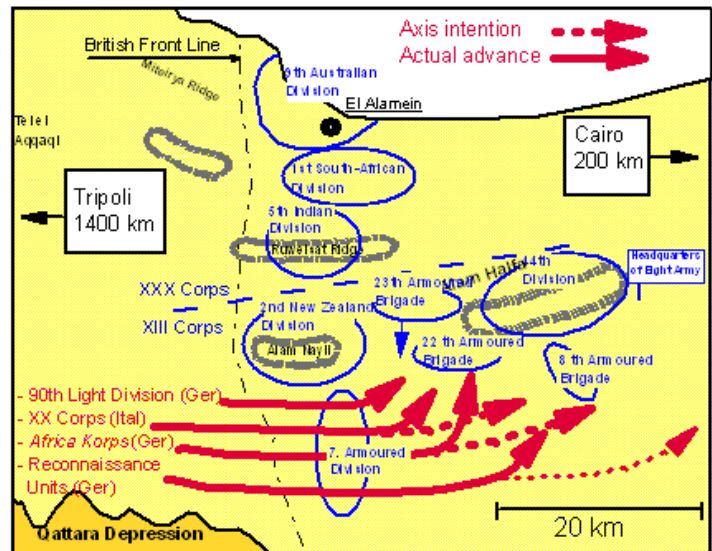
Sources: Bauer, p. 410 - 412; Jackson, pp. 38 - 69; Liddell Hart(1970), pp 110 - 111.

Map 2: German attack in Cyrenaica during the first part of 1941



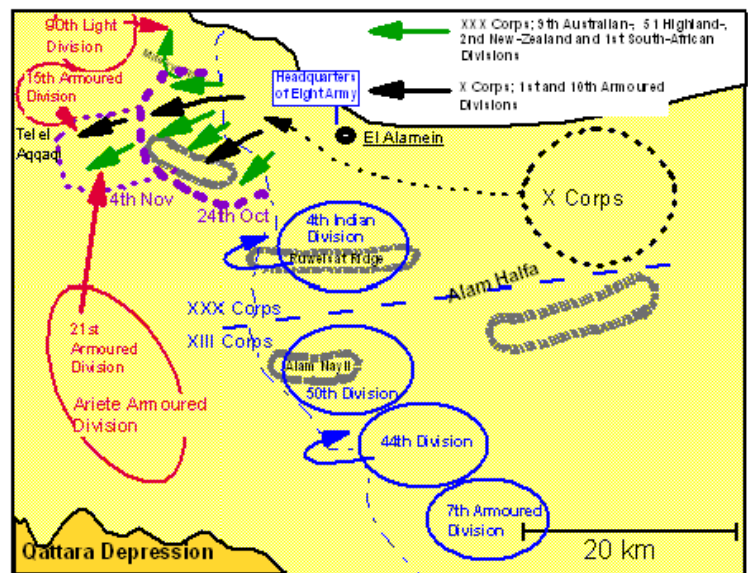
Sources: Jackson, pp. 91 - 115; Bauer, pp. 439 - 442.

Map 3: The Battle of Alam Halfa from 30th August to 3rd September 1942



Sources: Jackson, pp. 266 - 274; Liddell Hart (1970), p. 292; Fuller (1948), p. 233.

Map 4: The Battle of El Alamein from 24th October to 4th November 1942.



Sources: Jackson, pp. 285 - 302; Liddell Hart (1970), p. 300; Fuller (1948), p. 236.

### MAIN LESSONS OF THE BATTLE OF EL ALAMEIN

1. Careful planning of the initial break in battle: the tactical advantage must be acquired.
2. Careful selection of the axis of operations following the break in battle and rapid switching of the thrust line as opposition grows too stiff on any one axis.
3. The various axes of operations must enable deception.
4. The quick re-grouping of an Arm after the break-in battle, so as to have reserves available for developing new axis of operations.
5. The initiative gained in the break-in battle must not be lost.
6. The concentrated fire of artillery is a battle-winning factor of the first importance.
7. Strategical surprise is difficult to obtain. But tactical surprise is quite possible.
8. A Commander must so plan and conduct his battle that they are in a reach of the training standards of his troops
9. Determined leadership is vital, and nowhere is this more important than in the higher rank.
10. To win battles you require good Commanders in the senior ranks, and good senior staff officers. You also require an Army in which the morale of the troops is right on the top line.

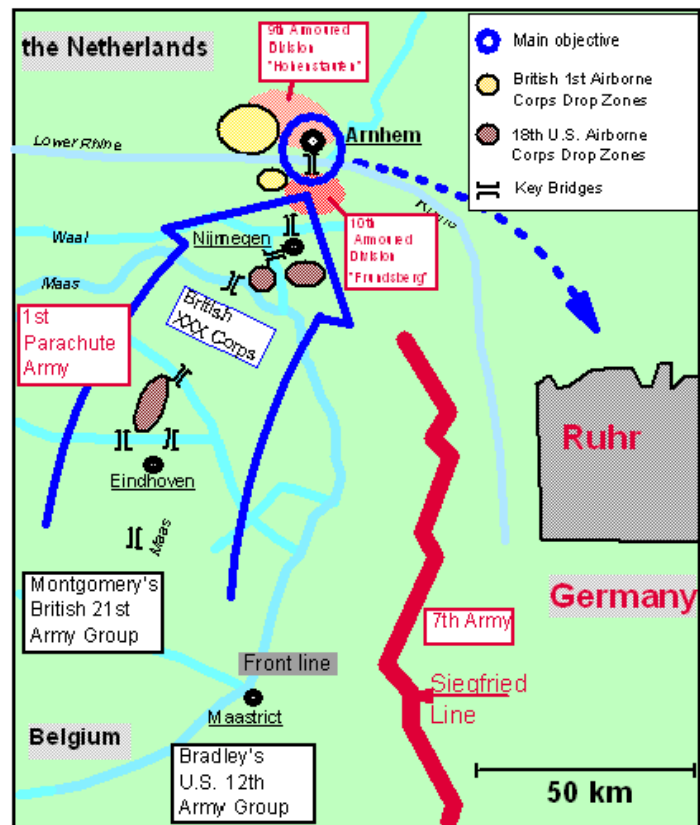
Written by Lt. Gen. B. L. Montgomery, 10 November 1942.

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Sources: Hamilton, pp. 49 - 50.



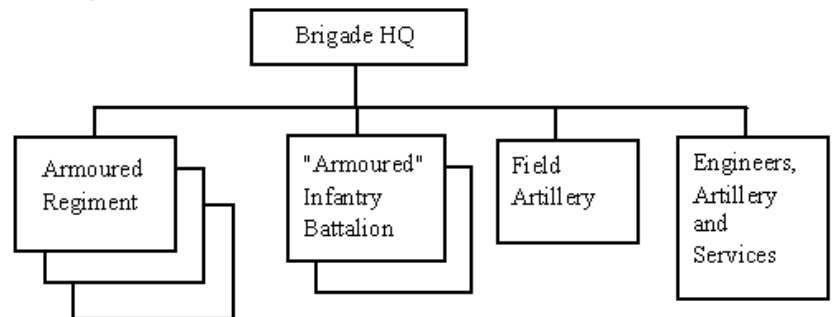
FIELD MARSHAL B. MONTGOMERY'S PLAN FOR OPERATION  
MARKET - GARDEN; SEPTEMBER 1944



Sources: Ryan, pp. 18 - 19, 76 - 77, 155, 217.

## EXTRACTS FROM IDEAS OF THE BRITISH POSTWAR ORGANISATIONS

**Table 1: Liddell Hart's ideas of the organisation of the Armoured Brigade (late 1940s)**

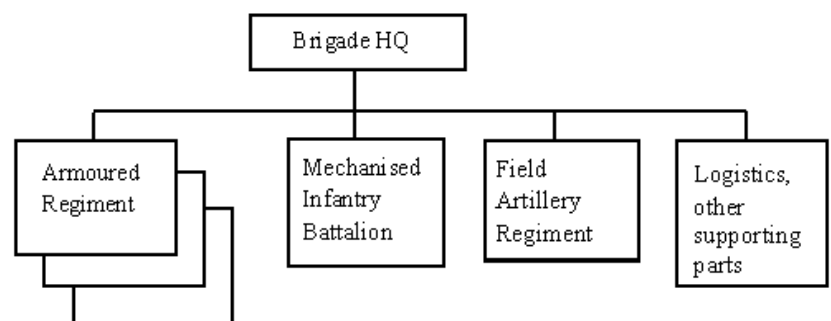


Sources: Liddell Hart (1950), p. 303.

## NOTES:

- The existing organisation was based on three armoured regiments (brigades) and one lorried infantry battalion and supply elements. Liddell Hart would strain the organisation with "appropriate proportion of artillery, engineers and services".
- Total amount of tanks in one Armoured Regiment was 48 and 70 altogether when all headquarter and reconnaissance vehicles are counted.

**Table 2: The Armoured Brigade (1957)**



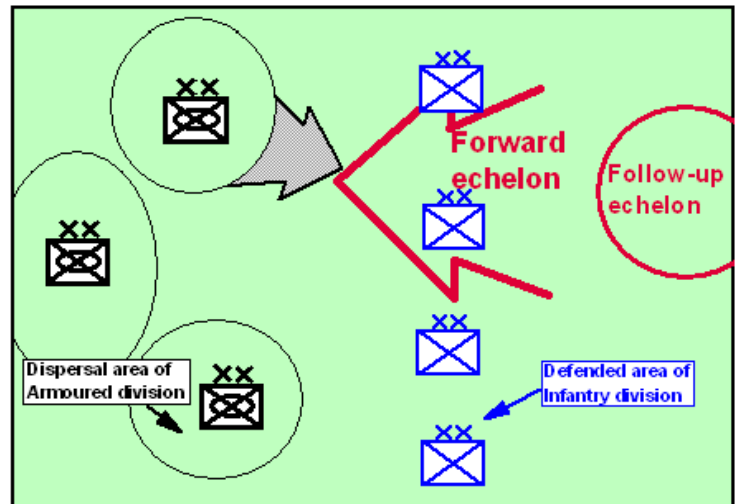
Sources: Dyster, p. 376.

## NOTES:

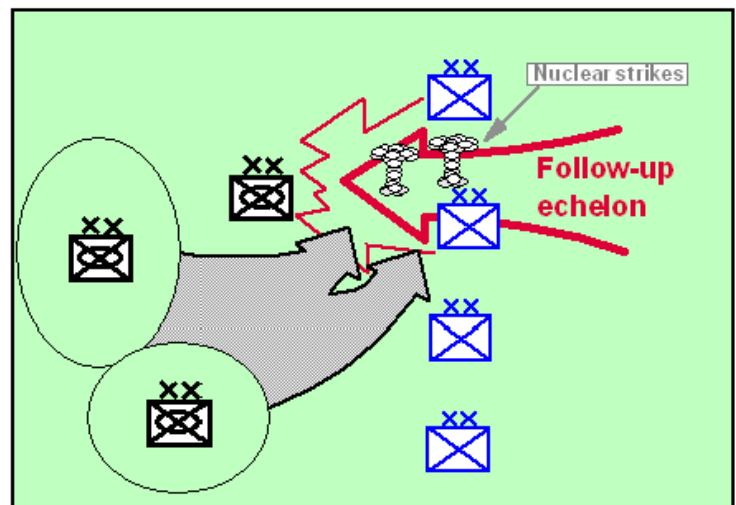
- A Field Artillery Regiment had U. S. -made 155 mm. self-propelled howitzers.

MAJOR-GENERAL H. E. PYMAN'S CONCEPT OF THE FUTURE  
METHODS OF NATO DEFENCE IN EUROPE (1954)

First Phase, Defensive



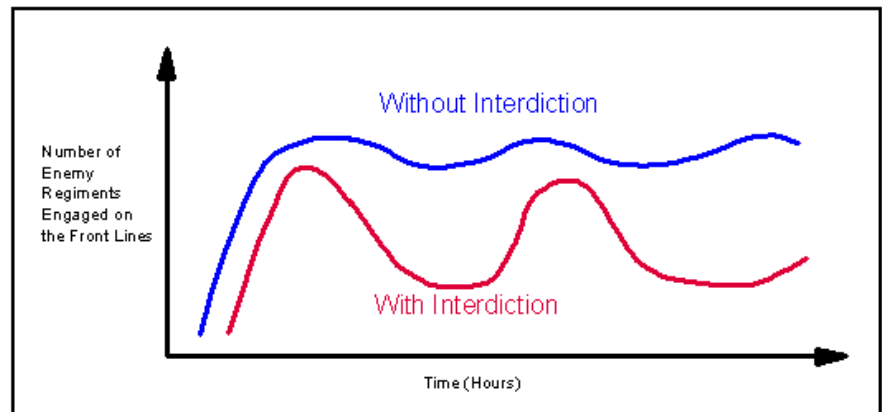
Second Phase, Counterattack



Sources: Pymán, pp. 223 - 224. Pymán was a commander of the 11th Armoured Division in BAOR.

Notes: The line of operation during the counterattack during the second phase is based on my own interpretation of Pymán's ideas. He expressed the need to approach the main objective from different angles. Therefore, particularly the line of operation of the rearmost armoured division can be different.

### THE IDEA OF DEEP STRIKES AGAINST ADVANCING SOVIET ECHELONS (AirLand Battle -doctrine)



The figure demonstrates the paradox in the AirLand doctrine of selective deep strikes against the succeeding echelons of follow-on forces with an outnumbered defensive force. The graph shows a solution to this challenge. **The Blue line indicates** the number of enemy regiments reached the FEBA only little affected over time. Although the leading offensive units are badly worn out, only a fraction of the losses are directed against the later echelons.

**The Red line indicates** the shifted firepower of the defensive firepower to succeeding echelons from the beginning. The strength of the attacker may drop below that of the defense, creating time "windows" for counteraction.

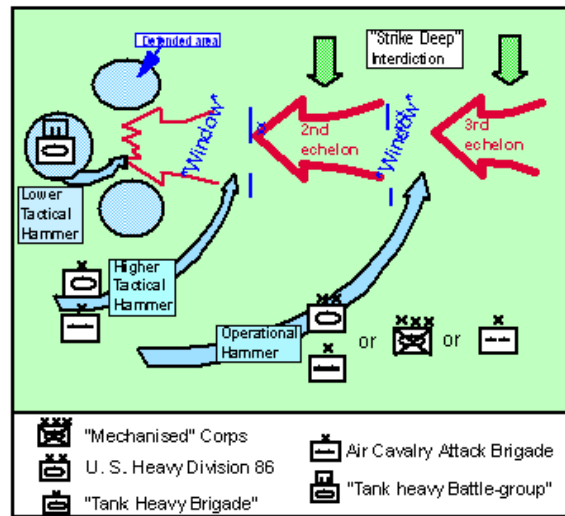
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Sources: Lieutenant General William R. Richardson, "Winning on the Extended Battlefield." An article in *Army* 31:6, June 1981, p. 42. Quoted in Lancaster, p. 29. Richardson was Deputy Chief of Staff for Operations in the Department of the Army.

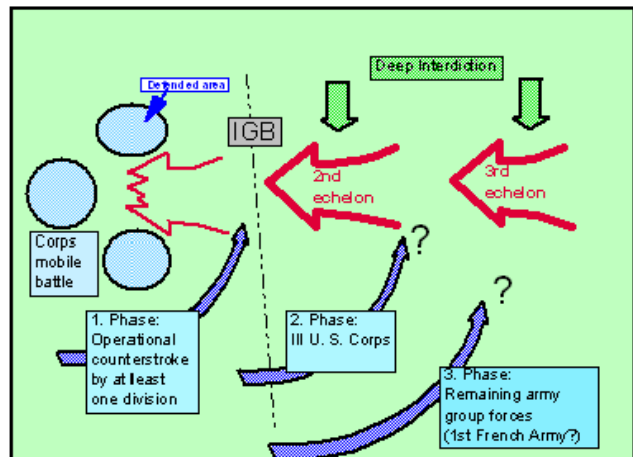
Notes: The relative proportion of the curves is based on extensive computer simulation of corps-sized European battles carried out by the Army's Field Artillery School.

**IDEAS OF NATO DEFENCE DURING THE 1980S**

**Figure 1: Brigadier Simkin's Scheme to Illustrate "anvil and triple hammer defence" (1986)**



**Figure 2: General Martin Farndale's Concept of NORTHAG's Defence In late 1980s**

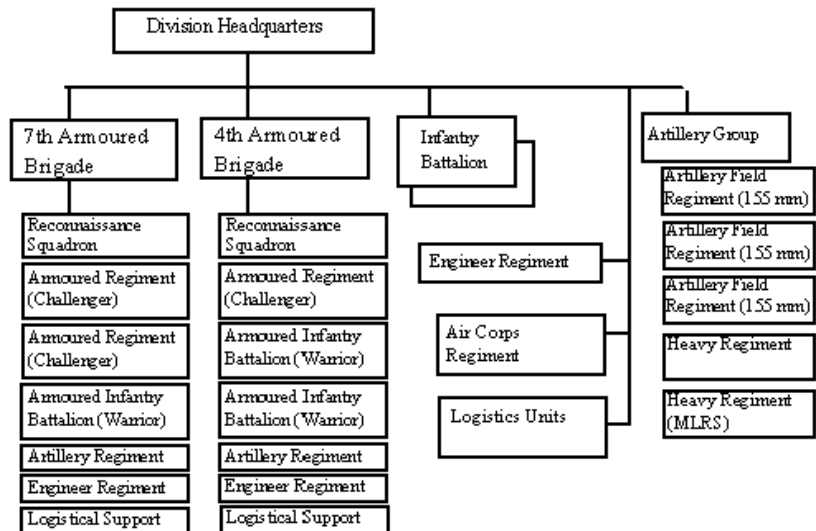


Sources: Simkin (1986), pp. 304 - 306; McInnes, p. 69.

Notes: Farndale's line of operations during the second and third phases is somewhat a matter of speculation. 2nd and 3rd phases would be directed beyond IGB, but probably not so deep as what Simkin envisioned.

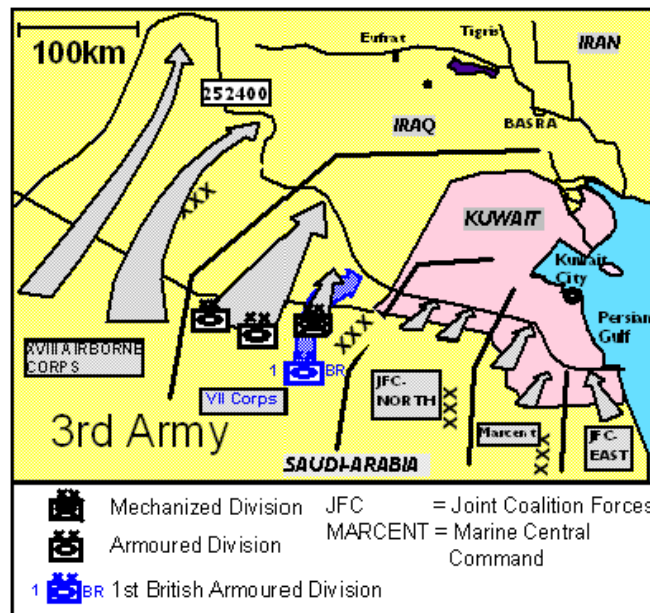
THE GULF WAR IN THE EARLY 1990s

Table 1: The 1st British Armoured Division (during the Gulf War in early 1990s)



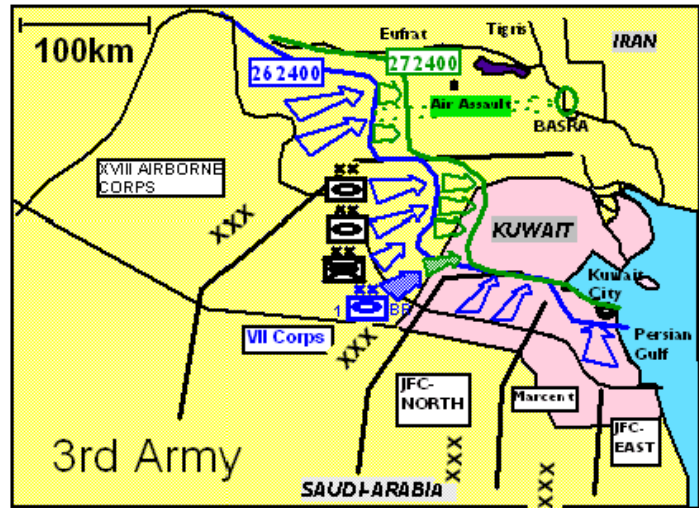
Source: McInnes, pp. 85, 89 - 90.

Map 1: Operation Desert Sabre until 25.2.1991



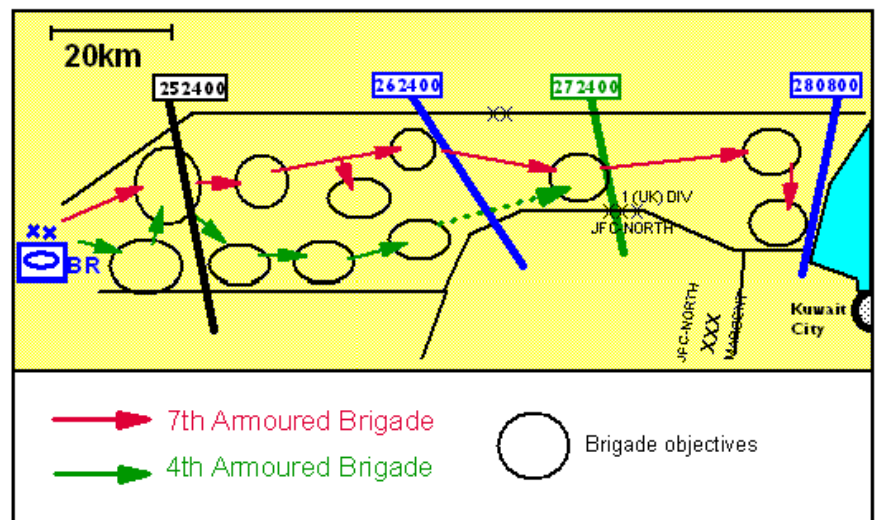
Source: Swain (1997), pp. 242, 251, 253; McInnes, p. 99; Friedman, pp. 223, 226 - 227.

Map 2: Operation Desert Sabre Between 26 - 27.2.1991



Source: Swain (1997), pp. 242, 251, 253; McInnes, p. 99; Friedman, pp. 223, 226 - 227.

Map 3: Axis of movement of British Armoured Brigades during the operation



Source: McInnes, p. 99.