

## *Lessons Learned?*

# *The Evaluation of Desert Warfare and Amphibious Landing Practices in the German, British and Turkish Armies after 1918\**

Gerhard GRÜSSHABER

Dr. phil., Munich/Germany

E-Mail: g.guesshaber-gs@web.de

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### ABSTRACT

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The article focuses on the question if and how the three belligerents of the First World War applied their military experiences gained in desert warfare and the conduct and defence of amphibious operations during the interwar years and the Second World War. This question is of particular relevance, since the conditions for the campaigns in North Africa (1940-43) and the invasion of northern France (1944) in many ways resembled those of the 1915-18 operations at Gallipoli as well as in the Sinai desert and in Palestine.

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*Keywords:* First World War; Gallipoli; D-Day; Afrikakorps; Second World War

## ÖZ

GRÜSSHABER, Gerhard, **Dersler Alınmış mı? Çöl Savaşının Değerlendirmesi ve Alman, İngiliz ve Türk Ordularında 1918 Sonrası Amfibik Çıkarma Uygulamaları**, CTAD, Yıl 15, Sayı 29 (Bahar 2019), s. 3-33.

Bu makale, iki dünya savaşı arası dönemde ve İkinci Dünya Savaşı sırasında Birinci Dünya Savaşı'nın üç muharibinin çöl savaşında edindikleri askeri deneyimler ile amfibik hareketin yürütülmesi ve savunulmasını uygulayıp uygulamadıkları sorusuna odaklanıyor. Bu soru özellikle önem taşıyor çünkü Kuzey Afrika'daki seferlerin (1940-43) ve Kuzey Fransa'daki Normandiya Çıkarması'nın (1944) şartları birçok yönden Çanakkale'deki, Sina Çölü'ndeki ve Filistin'deki 1915-18 hareketlerine benziyordu.

*Anahtar Kelimeler:* Birinci Dünya Savaşı; Gelibolu; Normandiya Çıkarması; Afrika Kuvvetleri; İkinci Dünya Savaşı

## Introduction

Within armed forces, the implementation of military lessons is easier said than done. The analysis of past campaigns often bears the danger of coming to wrong conclusions and excluding possible alternatives, especially by neglecting one's own societal and military limitations. As a result, not every knowledge acquired in war can be applied, and therefore adaptations are appropriate.<sup>1</sup> This was also valid after 1918 when most of the formerly belligerents analyzed their military experiences carefully. Among them were also the German, British and Turkish armed forces that had, to take a case in point, gained expertise in desert warfare and the conducting and defense of amphibious operations. Amphibious warfare refers to offensive combined military operations, supported by sea and air power, with the objective of landing troops from naval vessels to a shore held by enemy forces. Warfare in the desert poses special requirements, because

“[...] mobility holds the key to success and survival in the desert, whether it is exercised by cavalry, camel troops or fully mechanized formations. Marching infantry are terribly vulnerable and, faced with the horrors of dying of thirst, are inclined to give up following a reverse which would be considered acceptable in more temperate zones. [...] Just as the desert is incapable of compromise, battles fought therein result in total victory or total defeat.”<sup>2</sup>

<sup>1</sup> William C. Fuller, “What is a Military Lesson?”, Thomas G. Mahnken et al. (eds.), *Strategic Studies: A Reader*, 2nd ed., Routledge, New York, 2014, pp. 22-39, p. 35; Gerold Gleich, “Betrachtungen über die Kriegführung in Mesopotamien”, *Zwischen Kaukasus und Sinai. Jahrbuch des Bundes der Asienkämpfer*, Vol. 3, 1926, pp. 81-105, p. 82.

<sup>2</sup> Bryan Perrett, *Desert Warfare. From its Roman origins to the Gulf Conflict*, Patrick Stephens, Wellingborough, 1988, p. 11.

In this context, motorization refers to the partial equipment of infantry or cavalry units with motor vehicles as a main means of transportation. Mechanization means that the entire fighting power of the unit rests on the motor, that is, on the use of armoured cars and tanks. As illustrated below, the development of both elements of modern warfare had an immense impact on the conduct of war after 1918.

So far, the question has not been studied thoroughly if and how the aforementioned nations applied the experiences gained in these fields.<sup>3</sup> That is why this article will focus on the possible utilization of these wartime practices during the interwar years and the early 1940s, as well as on the possible impact of these learnings on the German and British campaigns of the Second World War. With regard to warfare under desert conditions the first part of this study will investigate the potential usage of warfare practices from the Ottoman theaters of war in Palestine and the Sinai desert for the campaigns in North Africa (1940-43), and the second part will deal with the relevance of the 1915-16 Çanakkale (Gallipoli) campaign for the invasion and failed defense of Northern France (1944). With regards to the Turkish army, this article will focus on the interwar analysis of both types of military operations in the national military press. Due to the destruction of most of the relevant German archival material in 1944, the documents of the U.S. Army Historical Division will serve to fill the gap of relevant archival records.<sup>4</sup> In these studies, veteran German officers who had served in the army (*Wehrmacht*) or the navy (*Kriegsmarine*) explained in detail the preparations for the organization of the *Afrikakorps* and the concepts behind the German defense measures against an invasion in Northern France.

## **From *Asienkorps* to *Afrikakorps***

### **The Turkish Military Press and the Sinai and Palestine Campaigns**

While the Çanakkale campaign dominated the discourse on the First World War, desert warfare did not play a prominent role in the Turkish military press

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<sup>3</sup> As indicated in Klaus Wolf, *Gallipoli 1915. Das deutsch-türkische Militärbündnis im Ersten Weltkrieg*, Report, Sulzbach/ Taunus and Bonn, 2008, 204 and Helmut Becker, *Äskulap zwischen Reichsadler und Halbmond. Sanitätswesen und Seuchenbekämpfung im türkischen Reich während des Ersten Weltkriegs*, Murken-Altrogge, Herzogenrath, 1990, 449. For experiences gained in other fields in the German case see Bruno Thoß (ed.), *Erster Weltkrieg - Zweiter Weltkrieg. Ein Vergleich. Krieg, Kriegserlebnis, Kriegserfahrung in Deutschland*, Schöningh, Paderborn et al., 2002.

<sup>4</sup> *Manuscripts assembled under the Foreign Military Studies Program of the Historical Division*, United States Army Europe, 1945-1954; United States National Archives. Henceforth abbreviated as *US NARA HD*. Accessed via the Fee-based service {[www.fold3.com](http://www.fold3.com)}; last retrieved: August 2016. Cf. Winfried Mönch, *Entscheidungsschlacht 'Invasion' 1944? Prognosen und Diagnosen*, Franz Steiner, Stuttgart, 2001, pp. 38-40.

after 1923. There were numerous translations of British and other foreign articles, but only a small number of analyses by Turkish authors.<sup>5</sup> Below paragraph will focus on the campaigns in the Sinai desert and in Palestine.

Throughout the war the Ottoman military medical service could not cope with demands of a mass army operating in tropic climate.<sup>6</sup> Likewise, during the two campaigns against the Suez Canal in 1915 and 1916, the negligence of supply had become evident. The Ottoman private Ihsan Hasan Turjman, an Arab of Turkish descent serving in the military logistics department in Jerusalem, noted in his diary on the freshly drafted Ottoman recruits: “*They were wearing rags, many of them limping and wearing one shoe, or no shoes. [...] And they were supposed to liberate Egypt.*”<sup>7</sup> The supply problems did not only affect the soldiers’ personal equipment, but the whole operation. Several veteran officers stated that the preparations for the Ottoman campaign against the strategically important lifeline of the British Empire had been insufficient. The 450 kilometres from the railhead in southern Palestine to the Canal zone had to be covered by foot by most of the Ottoman troops. In order to avoid the hot noon sun and to save water, the army rested between 9 am and 3 pm in tents and shadows and continued their march throughout the night. The calculations for food and water reserves, however, were based on wrong assumptions, leading to shortages towards the end of the campaign. Camels and horses were used on the unpaved runway crossing the sand and stone desert, since sufficient motorized transport was not available.<sup>8</sup> The Ottoman forces had no radio communication at their disposal and were spotted by British air reconnaissance before they approached the Suez Canal. That is why the British guards were not taken by surprise and repelled the fierce Ottoman attack. The light Ottoman field artillery could not sustain sufficient supporting fire. To make things worse, the Ottoman engineer detachments were not properly trained for a fast crossing of the canal.<sup>9</sup> In contrast to the long Ottoman supply routes the British defenders received reinforcements and ammunition by train within short time. After little more than two weeks in early February 1915 the Ottoman forces had to withdraw to Southern Palestine. They were to return for a second

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<sup>5</sup> Hakan Türkkan, *Askerî Mecmua’da Birinci Dünya Savaşı Türk Cepheleeri (1-146 Sayılar)*, M.A. Thesis, Kırıkkale Üniversitesi, Sosyal Bilimler Enstitüsü, Tarih Anabilim Dalı, 2007, p. 43, p. 49.

<sup>6</sup> M. Neş’et, *Büyük Harpte ‘Suriye’ Cephesinde 48. Piyade Fırkası. 77 Numaralı Askerî Mecmua’nın Tarih Kısmı*, Askerî Matbaa, İstanbul, 1930, p. 4; Becker, *op. cit.*, pp. 446-447.

<sup>7</sup> April 25, 1915. Salim Tamari, *Year of the Locust. A Soldier’s Diary and the Erasure of Palestine’s Ottoman Past*. Berkeley, University of California Press, 2011, p. 110.

<sup>8</sup> Behçet, *Büyük Harpte Mısır Seferi. 76 Numaralı Askerî Mecmuaya Labikâdur*. İstanbul, Askerî Matbaa, 1930, pp. 12-13, pp. 28-29.

<sup>9</sup> Celalettin Sorguncu, “1915 Senesi Başındaki Süveyş Kanalı Geçit Harekâtı ve İstihkâm Birliklerinin Kullanılması Hakkında Bir Tetkik”, *Askerî Mecmua*, Vol. 53 No. 99, 1935, pp. 978-1014, pp. 982-987.

unsuccessful attack in August 1916, resulting in Ottoman defeat in the battle of Romani.<sup>10</sup> In order to achieve their strategic goals, the retired colonel Behçet stated that the Ottoman army would have needed better armament.<sup>11</sup> For lieutenant colonel Sorguncu the Ottoman defeats at Sarıkamış and the Suez Canal were both the outcome of an adventurous wartime policy of the Ottoman government. An army suffering from so many deprivations could never reach its operative objectives.<sup>12</sup>

### Turkish Lessons of the First World War

Under these conditions warfare in the desert was not eased. In Palestine and Syria, the Ottoman forces could not sustain a durable resistance to the British offensives, the longer the war lasted. The deployment of better equipped Ottoman infantry units, previously deployed to the fronts in Eastern Europe, and of the German *Asienkorps* to Palestine brought only a slight relief. Nonetheless the holding of Mecca, Medina, the connecting Hijaz railway and the territories in Yemen, as well as the insurgency of Arab tribes against the Ottoman rule, bound additional forces.<sup>13</sup> Besides the fact that the Ottoman army was not ready for war by 1914, the main reason for Ottoman defeat in 1918 was the dissipation of military force throughout the empire. Instead of defending the endangered frontline in Palestine with all forces available, troops were held back in Trakya and Anatolia for the unlikely event of an invasion on the imperial mainland. And by 1918 the Ottoman high command even deployed forces to the Caucasus.<sup>14</sup> Therefore, Behçet quoted the Prussian king Frederick the Great, when he concluded: “*He who tries to defend everywhere defends nowhere.*”<sup>15</sup> Following these experiences during the First World War the Turkish government was reluctant to wage war in a desert environment.<sup>16</sup> Turkey

<sup>10</sup> Eugene Rogan, *The Fall of the Ottomans. The Great War in the Middle East 1914-1920*, Allen Lane, London, 2015, pp. 115-124, pp. 311-316.

<sup>11</sup> First of all, the whole operation lacked air support: at least two Zeppelin airships and a wing of twelve airplanes for bombing and strafing the enemy's ships in the canal zone. According to Behçet such an operation required the deployment of sea mine specialists in order to effectively disturb the passage through the Suez Canal. In addition, more machine guns, light mountain artillery pieces and some batteries of heavy artillery were needed to achieve breakthrough. Behçet, *op. cit.*, pp. 31-32.

<sup>12</sup> Sorguncu, *op. cit.*, p. 987, pp. 1006-1007.

<sup>13</sup> Neş'et, *op. cit.*, p. 30, p. 88; Behçet, *op. cit.*, p. 34.

<sup>14</sup> Fazıl Bilge, “Osmanlı Ordusu Başkomutanlığı Büyük Harpten daha muvaffakiyetli bir şekilde çıkabilir miydi?”, *Askerî Mecmua*, Vol. 55 No. 105, 1937, pp. 260-266; pp. 263-265.

<sup>15</sup> Behçet, *op. cit.*, p. 34.

<sup>16</sup> Before the settlement of the Mosul question in autumn 1924, Turkey was on the brink of war with the British mandate power in neighbouring Iraq. Cf. Nevin Coşar, Sevtap Demirci, “The Mosul Question and the Turkish Republic: Before and After the Frontier Treaty, 1926”, *Middle Eastern Studies* Vol. 42, No. 1, 2006, pp. 123-132; pp. 126-127. In January 1937 during the dispute

refrained from entering the Second World War, and the coverage of the events of the North African campaign in the national military press favoured the British side. With the words of a contemporary Turkish observer, the Allied victory in the second battle at El Alamein in late 1942 “*was a sign for the excellence of the [British] war and arms resources and the superiority over the Axis in conducting operations.*”<sup>17</sup>

### **German Preparations for Desert Warfare**

In the First World War Germany had assisted its Ottoman ally on the Palestine frontline with a special detachment, the 5.000-strong *Asia Corps* (*Asienkorps*). In 1941 the German army deployed a much larger force to the North African theatre of war. By 1943 around 250.000 German troops served in the so-called *Africa Corps* (*Afrikakorps*). Like in the case of the Ottoman fronts, for Germany the North African campaign was a side-show theatre of war. During the Second World War, the main task of the German forces was to support the Italian ally and, like in the First World War, to bind British troops in Egypt. By 1941 the German troops had the clear advantage of combined arms warfare experience collected during their campaigns since September 1939, whereas the British forces were more skilled in desert warfare.<sup>18</sup>

After 1918 there had been several publications dealing with the experiences of the past in the Middle Eastern campaigns. In Germany, there was a strong interest in the use of horses by the Commonwealth forces in Palestine, and the authors were convinced that the deployment of cavalry was a favourable tactical measure in desert campaigns.<sup>19</sup> On the contrary, for British observers, Palestine was “*almost the swan-song for cavalry*” since “*the age of machine-based warfare had*

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over the Hatay province with France, prime minister İsmet İnönü ordered the preparation of “*an operational proposal for a strategic attack on the Syrian border areas with an emphasis on the important railway knot Aleppo.*” Grüsshaber, *op. cit.*, 216; cf. Serhan Ada, *Türk-Franız İlişkilerinde Hatay Sorunu 1918-1939*, 2nd ed., İstanbul Bilgi Üniversitesi Yayınları, İstanbul, 2013, p. 125.

<sup>17</sup> Şeref Sünal, “Elâlemeyn Meydan Muharebesine Takaddüm Eden Harekât ve Elâlemeyn Meydan Muharebesi”, *Askerî Mecmua*, Vol. 62 No. 16, 1944, pp.54-64, p. 62. Cf. also İsmail Oray, “Kuzey Afrika Savaşları”, *Askerî Mecmua*, No. 65 Vol. 141, 1947, pp. 48-52, p. 51.

<sup>18</sup> Peter Lieb, *Krieg in Nordafrika 1940-43*, Reclam, Ditzingen, 2018, 38-45; Walther Kurt Nehring, *Die Geschichte der deutschen Panzerwaffe 1916 bis 1945*, Propyläen, Berlin, 1969, p. 131.

<sup>19</sup> Cf. the translation of an American study by Benary, “Das englische Pferd im Palästina-Feldzuge”, *Militär-Wochenblatt* Vol. 113 No. 24, 1928, cols. 959-961 and the first part of the article series by Otto Welsch, “Der Anteil berittener Truppen des ‘Ägyptischen Expeditionskorps’ an dem Kampfe um Palästina”, *Wissen und Wehr*, Vol. 17 No.7, 1936, pp. 693-709, p. 708.

arrived.”<sup>20</sup> Consequently, one of the British commanders drew the following conclusions:

“But the true lesson is not so much the value of the horseman as the value and power of mobility, however achieved. [...] Now consider whether a mechanized force could have carried out even more expeditiously and with less loss what the cavalry accomplished in Palestine. [...] [Accordingly] there can be no question that armoured fighting vehicles could have achieved victory more surely and effectively than did the cavalry.”<sup>21</sup>

General Wavell further developed these tactics during his period of service in Palestine between 1936 and 1939, where he suppressed the rebellion of local Arab resistance groups.<sup>22</sup> German veterans also pointed to the fact that the German *Asienkorps* had been motorized partially, which proved to be advantageous in the desert. Each *Asienkorps* battalion had been equipped with light support weapons and therefore had been able to fight independently. However, the hot climate had taken its toll in terms of a high sickness rate of around 30 percent among the soldiers. Therefore, it was requested that these circumstances should be taken into account and a future German expeditionary force for tropical theaters of war should have more medical troops at its disposal than usual.<sup>23</sup> Yet, these calls for intensified medical care went unheard in the Second World War.<sup>24</sup>

Beside that, the retired general Kreß von Kressenstein pointed to the fact that before 1914 “no one had expected the possibility that German soldiers would ever wage war in the Sinai Desert.”<sup>25</sup> In a similar stance an *Afrikakorps* veteran compared the unprepared Imperial army to the *Wehrmacht* prior to 1939, when he remarked that although “[t]he absence of maps of Palestine had already proved a great disadvantage in the previous war [...]”<sup>26</sup> he and his superiors saw no necessity to add cartographic material of North Africa to the General Staff’s map collection.

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<sup>20</sup> Matthew Hughes, “General Allenby and the Palestine Campaign, 1917-18”, Brian Holden Reid (ed.), *Military Power. Land Warfare in Theory and Practice*, Frank Cass, London, Portland, 1997, pp. 60-88; p. 62, p. 83.

<sup>21</sup> Archibald Percival Wavell, *The Palestine Campaigns*, Constable, London, 1928, pp. 234, 236, 237.

<sup>22</sup> Simon Anglim, “Callwell versus Graziani: How the British Army Applied ‘Small Wars’ Techniques in Major Operations in Africa and the Middle East, 1940-41”, *Small Wars & Insurgencies*, Vol. 19 No. 4, 2008, pp. 588-608; pp. 595-597.

<sup>23</sup> [Paul] Platz, “Das deutsche Asienkorps. Ein Beitrag zur Aufstellung von Expeditionskorps”, *Militär-Wochenblatt*, Vol. 116 No. 15, 1932, cols. 490-493.

<sup>24</sup> Rolf Valentini, *Ärzte im Wüstenkrieg. Der deutsche Sanitätsdienst im Afrikafeldzug 1941-1943*, Bernard & Graefe, Koblenz, 1984, pp. 154-155.

<sup>25</sup> Friedrich Kreß von Kressenstein, “Kriegführung in der Wüste”, *Wissen und Wehr*, Vol. 17 No. 9, 1936, pp. 565-590, p. 588.

<sup>26</sup> Siegfried Westphal, “Notes on the Campaign in North Africa, 1941-1943”, *Journal of the Royal United Service Institution*, Vol. 55 No. 617, 1960, pp. 70-81.

What is more, the German army neglected the option of any future war in the desert totally:

“Prior to World War II not a soul in the German armed forces imagined the possibility of it becoming necessary in any future war to conduct land warfare outside Europe. [N]o particular attention was paid in the army to the military experience of this type gained during World War I [...]. Prior to the outbreak of war in 1939, no preparations of any sort had been made in the German army for any desert warfare that might possibly become necessary in the future.[...] The African campaign took on such entirely new forms owing to the almost exclusive use of mobile troops by both sides in the desert, that it was not possible in planning to make use of any examples taken from modern history. The methods of modern desert warfare were created by Field Marshal Rommel.”<sup>27</sup>

To put it bluntly, by 1941 the German army was not ready for a campaign in the desert. The preparations for the deployment of German troops had to be completed within short time, only using the sources at hand:

“The division staff had done some library research on tropical conditions. [...] [T]he Germans had no practical experience in desert warfare. They had fought campaigns in Africa in World War I, but these had been conducted in the rain forest or the veldt. [...] As much as it could, the OKH [German Army High Command] did turn to the veterans of the World War I campaigns as the only source of practical experience. [...] Even though the Italians were experienced in desert warfare, they gave little aid to their German allies [...] [who] were left entirely to their own devices in planning, organizing, and equipping their Africa Corps.”<sup>28</sup>

However, this special staff for the Libyan campaign (*Sonderstab Libyen*) consisted exclusively of army veterans from the former German colonies in Southwest and Southeast Africa and Cameroon. Nonetheless, during the preparatory phase, the experiences made by the *Asienkorps* were analyzed by the German army high command: “*Whether the German horses and pack animals are fit for tropical service must be checked. The ‘German Asia Corps’ used Turkish horses and pack animals during their deployment in Palestine. Detailed tests of the usability of horse-drawn divisions under tropical conditions are necessary.*”<sup>29</sup> However, after the analysis of the failed Italian attack on Western Egypt in late 1940, it became evident “*that*

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<sup>27</sup> US NARA HD P-129, Fritz Bayerlein, Sigismund Kienow, “German Experiences in Desert Warfare During World War II.” Vol. I, 1952, p. 4.

<sup>28</sup> Warner Stark, “The German Africa Corps”, *Military Review*, Vol. 45 No. 7, 1965, pp. 91-97; pp. 93-95.

<sup>29</sup> Proposal by the OKH, dated April 7, 1941. Quoted after Erhard Moritz, “Planungen für die Kriegführung des deutschen Heeres in Afrika und Vorderasien”, *Militärgeschichte*, Vol. 16 No. 3, 1977, pp. 323-333; p. 328. A probable source for the use of horses and mules by the German *Asienkorps* must have been Platz, *op. cit.*, 493.

*troops which are not motorized are valueless in desert warfare and can do nothing whatever against a motorized enemy.*"<sup>30</sup> The *Afrikakorps* was thus deployed as a fully motorized and mechanized force.

### Supply Challenges from *Asienkorps* to *Afrikakorps*

Whereas the first two British commanders in the North African theatres of war, Archibald Wavell and Claude Auchinleck, had served in the campaigns against the Ottoman Empire in the First World War, the German commander Erwin Rommel had applied for service with the Ottoman ally but had been rejected.<sup>31</sup> Rommel, therefore, drew from his wartime experience in mountain warfare, since he had fought in the Alps against Italy- his ally in the Second World War.<sup>32</sup> The longer the campaign in North Africa lasted, the more "Rommel believed will-power could resolve his supply problems [...]"<sup>33</sup> a direct outcome of his preferred way of mobile warfare resulting in overstretched supply lines.

The German forces had faced similar problems at the Southeastern frontlines of the Ottoman theatres of war. Prior to the First World War, the Ottoman state had only been able to finance single-track railway lines. In total the rolling stock comprised of not more than one hundred trains for a multi-front war. Due to the unfinished railway line in the Taurus mountains goods had to be reloaded three times.<sup>34</sup> In 1914 "there was an inadequate system of roads, no emergency supply depots for ammunition, and no single railway that spanned the length of Palestine, nor a continuous rail line that connected Palestine to Anatolia and Istanbul."<sup>35</sup> The situation was not to improve much throughout the war. The deployment of the German *Asienkorps* was delayed for several months due to the insufficient infrastructure. The first German detachments arrived by November 1917, too late to stabilize the collapsing front at Gaza. On the contrary, the British supply chain from Egypt via the Sinai desert was much more efficient

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<sup>30</sup> US NARA HD P-129, *op. cit.*, pp. 3-4.

<sup>31</sup> Tony A. Heathcote, *The British Field Marshals 1736-1997. A Biographical Dictionary*, Leo Cooper, Barnsley, 1999, pp. 28-35; pp. 287-291; Ulrich Trumpener, "German Officers in the Ottoman Empire, 1880-1918. Some Comments on their Backgrounds, Functions and Accomplishments", *Jahrbuch des Instituts für deutsche Geschichte*, Vol. 4 Supplement No. 1, 1975, pp. 30-43; p. 38.

<sup>32</sup> James M. Milano, "How Rommel Applied Lessons Learned in WWI To His Afrika Korps Operations in WWII", *Armor. The Professional Development Bulletin of the Armor Branch*, Vol. 50 No. 5, 1991, pp. 26-29, p.26.

<sup>33</sup> James J. Sadkovich, "Of myths and Men: Rommel and the Italians in North Africa, 1940-1942", *The International History Review*, Vol. 13 No.2, 1991, pp. 284-313, p. 308.

<sup>34</sup> Mesut Uyar, Edward J. Erickson, *A Military History of the Ottomans. From Osman to Atatürk*, Praeger Security International, Santa Barbara, Denver, Oxford, 2009, p. 273.

<sup>35</sup> Eyal Berelovich, Ruth Kark, "The Missing Element in Palestine: Infrastructure and Logistics During the First World War", *First World War Studies*, Vol. 8 No. 2/3, 2017, pp. 153-172, p. 155.

and comprised even of a water pipeline.<sup>36</sup> That is why during the First World War, no kind of war, similar to Central European dimensions, was feasible for the Central Powers on the Southeastern frontlines. Together with the logistic challenges mentioned before, an effective blockade of the Eastern Mediterranean by the Entente navies and a grave famine in Syria and Lebanon led to the failure of the two Ottoman attacks on the Suez Canal and paved the way for the British forces to seize the initiative after 1916.<sup>37</sup> This view was also shared by Krefß von Kressenstein, who had conducted the operations in the Sinai Desert in 1915 and 1916. Krefß warned his audience that the inability to adapt to the conditions of desert warfare could have severe consequences, as in the case of Italy's setbacks during Mussolini's campaign in Abessinia in 1935.<sup>38</sup>

In the Second World War Germany faced similar challenges in North Africa. The supplies went by train through Italy and were shipped over the British controlled Mediterranean Sea to the harbours in Libya and later Tunisia. Despite all efforts, this created severe capacity problems, since the small Italian harbours like in Tripoli could not handle the huge amount of cargo. A mechanized German division alone needed 350 tons of supply goods per day. The German air force could not ensure sufficient freight capacity. Within Libya, the German forces could use the Italian roads, especially along the coastline. However, about 35 percent of the motor fuel was used up while delivering it to the front, and about the same percentage of vehicles had to undergo intensified maintenance due to the rough climatic conditions.<sup>39</sup> To make things worse, the German military administration initially had neglected the need for sand filters for the trucks, which in addition had "[...] gasoline-operated engines, believing that diesel engines would 'freeze up' in the extreme desert heat. This was a misconception."<sup>40</sup> Even though there were severe losses of Axis cargo ships by Allied air and sea raids operating from Malta and Egypt, more than 90 per cent of the goods and men shipped to Libya arrived safely.<sup>41</sup> But even if the Axis powers would have occupied the British strongpoint Malta, they still would have faced the realities of the low capacity of the Italian ports in Libya and the long supply routes in the desert. Here we can say that like in the First World War, a railway line as operated by the British forces in Egypt, would have prevented an overstretch of

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<sup>36</sup> Walter Paschasius, "Die Nachschubverhältnisse auf dem vorderasiatischen Kriegsschauplatz im Weltkrieg", *Wissen und Wehr*, Vol. 23 No. 2, 1942, pp. 49-56; pp. 54-56.

<sup>37</sup> Berelovich, Kark, *op. cit.*, p. 162.

<sup>38</sup> Krefß, *op. cit.*, 568, 583-584.

<sup>39</sup> Martin van Creveld, "Rommel's Supply Problem, 1941-42", *Journal of the Royal United Services Institute* Vol. 119 No. 3, 1974, pp. 67-73, p9. 67-69; Lieb, *op. cit.*, 68.

<sup>40</sup> Stark, *op. cit.*, 95. Cf. also Charles Burton Burdick, *Unternehmen Sonnenblume. Der Entschluß zum Afrika-Feldzug*, Kurt Vowinckel, Neckargemünd, 1972, pp. 118-124 and the warning in Krefß, *op. cit.*, p. 579.

<sup>41</sup> George Forty, *The Armies of Rommel*, Arms and Armor, London, 1997, pp. 76-77.

the Axis supply lines. It is thus safe to say that the German and Italian forces were not able to move further than El Alamein. As in the First World War, an attack on Egypt and the Suez Canal was beyond the possibilities of the German military supply system, especially after the beginning of the campaign against the Soviet Union in the summer of 1941. Nonetheless, the British and Commonwealth forces could not use this situation to their advantage.<sup>42</sup> Only the landing of American forces in Morocco and Algeria turned the outcome of the campaign to their favour.<sup>43</sup> In sum, then it can be said that also in this campaign the German high command had followed the tradition of planning operations since Count Schlieffen and had neglected the importance of supply as the basis of all operations.<sup>44</sup>

### The Challenges of Coalition Warfare and of Medical Care

When the German army in early 1941 had to provide assistance to its ally Italy in Libya, the circumstances were not so different from the campaigns in the last war. Like in 1915 the seizure of Egypt and the Suez Canal had been the strategic objective of the campaign in North Africa. And like before in the case of General Falkenhayn in 1917 the behaviour of the German commanding officer in North Africa “*exacerbated the usual friction in alliance warfare [...]*.”<sup>45</sup> And as the Ottoman army in 1914, also Mussolini’s forces in 1939 had not been ready for a multi-front war intended by the German High Command, resulting in insufficient military effectiveness.<sup>46</sup> Therefore the defeat of the Italian forces under General Graziani in 1940 “*was partly explained by his lack of armoured and motorized formations.*”<sup>47</sup> Accordingly, some of the unedifying developments in the German-Ottoman alliance recurred in the North African campaign.<sup>48</sup>

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<sup>42</sup> van Creveld, *op. cit.* pp. 70-71.

<sup>43</sup> John M. Taylor, “North African Campaign: Logistics Lessons Learned”, *Military Review*, Vol. 63 No. 10, 1983, pp. 46-55, pp. 50-51. Note also the Turkish translation by Gökhan Tokus, “Kuzey Afrika Seferi: Alınan Lojistik Dersler”, *Kara Kuvvetleri Dergisi*, No. 74, 1984, pp. 118-127.

<sup>44</sup> Gerhard Paul Groß, *Mythos und Wirklichkeit. Geschichte des operativen Denkens im deutschen Heer von Moltke d. Ä. bis Heusinger*, Schöningh, Paderborn et al., 2012, pp. 93-95, p. 195.

<sup>45</sup> Grüsshaber, *op. cit.*, pp. 92-96 and 170-175; Neş’et, *op. cit.*, p. 27; Bastian Matteo Scianna, “Rommel Almighty? Italian Assessments of the ‘Desert Fox’ during and after the Second World War”, *Journal of Military History*, Vol. 82 No. 1, 2018, pp. 125-146, 129.

<sup>46</sup> Colmar von der Goltz, “Die Türkei im zweiten Jahre ihrer Wiedererhebung”, *Asiatisches Jahrbuch*, 1914, pp. 3-14, p. 9 and the letter by Mussolini to Hitler on August 25, 1939, *Akten zur Deutschen Auswärtigen Politik 1918-1945, Series D, Vol. VII, 1937-1941, Die letzten Wochen vor Kriegsausbruch: 9. August bis 3. September 1939*, Vandenhoeck & Ruprecht, Göttingen, 1956, No. 271, p. 239.

<sup>47</sup> Sadkovich, *op. cit.*; p. 291.

<sup>48</sup> “Further, the Germans, for all their efficiency, never seem to have appreciated the idiosyncrasies of the fighting methods of their allies. [...] All things considered, the Germans put as much grit as oil into the military machine.” Wavell, *op. cit.*, pp. 20-21; Gleich, *op. cit.*, 93-94.

Nonetheless, the Germans had a high esteem for the common Ottoman and Italian soldiers, and the British troops in most cases “*respected the fighting qualities of the Turkish soldier in much the same way that they admired the skill of the German soldiers 20 years later.*”<sup>49</sup>

The desert campaigns of the previous war offered numerous lessons, also from a medical aspect. The wartime research progress in tropical medicine was enormous.<sup>50</sup> Nevertheless by early 1941, the German military medical service was unprepared for such a campaign. German wartime experiences in the African colonies and at the Ottoman fronts were studied, complemented by the analysis of interwar practices in the Italian, French and even British armies. Yet these were to be insufficient measures: “*Consequently, only the most necessary organizational and sanitary measures could be taken. It was equally impossible to accustom the troops gradually to the great heat and to change their training to prepare them for fighting in [a] country providing no cover.*”<sup>51</sup> Among the many misjudgments were also the daily rations, which often contained meat and were too heavy for the North African environment. On the other hand, familiar ingredients of German cuisine went off the menu: “*Potatoes were discarded because they spoiled in storage due to the climate and were replaced with various legumes. It is strange that no one thought to can potatoes as did the British and Americans.*”<sup>52</sup> Indeed this decision was not quite comprehensible since experiences regarding proper diet in hot climates were available.<sup>53</sup> Admittedly the British and Commonwealth troops were facing similar challenges and had to use the supply at hand. To their surprise “*soldiers eating bully beef in 1942 found the date 1918 stamped on the tins!*”<sup>54</sup> With regard to the personal gear, the first design of the German uniform “*was unsuitable for the tropics*”,<sup>55</sup> quite contrary to the clothing used in the First World War.<sup>56</sup> Most likely the uniform designers at the Hamburg tropical institute had drawn their own conclusions of the respective paragraphs in the German military medical

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<sup>49</sup> Niall Barr, “The Desert War Experience”, Peter Liddle, John Bourne, Ian Whitehead (eds.), *The Great World War 1914-1945. Vol. 1: Lightning Strikes Twice*, Harper Collins, London, 2000: 120-135, 132; Gleich: *op. cit.*, 93 and Heinz Werner Schmidt, *Mit Rommel in Afrika*, Moewig, München, 1959, 33.

<sup>50</sup> Becker, *op. cit.*, pp. 446-448.

<sup>51</sup> Westphal, *op. cit.*, pp. 70-81, pp.71-72; Valentin, *op. cit.*, pp. 55-61.

<sup>52</sup> Stark, *op. cit.*, 96.

<sup>53</sup> Cf. the first part of a German veteran physician’s speech notes; Huntemüller, “Als beratender Hygieniker in der Türkei”, *Medizinische Klinik*, Vol. 15 No. 43, 1919, pp. 1100-1104; pp. 1103-1104.

<sup>54</sup> Barr, *op. cit.*, p. 128.

<sup>55</sup> Stark, *op. cit.*, 97. For a detailed overview cf. Roger James Bender, Richard D. Law (eds.), *Uniforms, Organization and History of the Afrikakorps*, R. James Bender Publishing, Mountain View, 1973, pp. 174-195.

<sup>56</sup> Gleich, *op. cit.*, 91.

standard reference work, which also included experiences gained on the Ottoman fronts.<sup>57</sup> In sum, then the British medical service proved to be superior to the Axis forces' counterpart. During the second battle at El Alamein, 20 percent of the German soldiers were sick due to infections such as dysentery, which might have been the decisive advantage over the German *Afrikakorps*.<sup>58</sup> In retrospect, the British commander Montgomery owed his victory in 1943 also to the expertise of his medical service as well as the "British Army's greater experience of fighting in hot climates."<sup>59</sup>

### Lessons Learned: The British Forces in the Western Desert

Whereas the German and Ottoman forces did not deploy tanks and only a limited number of armored cars to the southeastern fronts, the British army drew valuable lessons for tank warfare in the desert during the First World War.<sup>60</sup> While there were only a few rather outdated and slow *Mark I* tanks available, and the infantry officers were inexperienced in the proper use of the tank and its technical and tactical limitations, "[t]he tank operations in Sinai and Palestine conclusively proved that tanks could be employed almost anywhere in desert regions, and all that they required were certain improvements in mechanism and changes in design."<sup>61</sup> Therefore the British army by 1940 was more experienced in tank deployment under these special conditions, whereas the German forces had to improvise their tactical measures. Especially the British 7<sup>th</sup> armored division had a lead in this field, since "[m]any of its units had been in Egypt since 1935 and had acquired invaluable desert experience [...]."<sup>62</sup>

In the same way, the British army continued to further develop the tactics of the *Light Car Patrol*. This special unit had been comprised of a fully mechanized infantry detachment which, operating at the Egyptian Western border during the First World War. With their cross-country capability, they defended Egypt against the attacks of the Libyan Senussi tribe under the command of Ottoman instructors. The trucks were armed with machine guns and in some operations

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<sup>57</sup> Anton Waldmann, Wilhelm Hoffmann (eds.), *Lehrbuch der Militärhygiene*, Julius Springer, Berlin, 1936. See *ibid.* p. 43 for the sun helmet, p. 73 for tropical garment, p. 552 for the 'mosquito boots'. For problems with the short service trousers see Valentin, *op. cit.*, pp. 154-155; cf. also Platz, *op. cit.*, 491.

<sup>58</sup> Mark Harrison, *Medicine and Victory. British Military Medicine in the Second World War*, Oxford University Press, Oxford et al., 2004, pp. 88-90.

<sup>59</sup> *Ibid.*, 91.

<sup>60</sup> John F. C. Fuller, *Tanks in the Great War 1914-1918*, John Murray, London 1920, 98-99, 130-133; Krefß, *op. cit.*, 589.

<sup>61</sup> Fuller, *op. cit.*, 134.

<sup>62</sup> Lucio Ceva, "The North African Campaign 1940-43. A Reconsideration", John Gooch (ed.), *Decisive Campaigns of the Second World War*, Frank Cass, London et al., 1990, pp 85-104, 86; Nehring, *op. cit.*, pp. 181-214.

accompanied by armored cars. In March 1916 they made a successful raid on the Senussi stronghold west of Salum, thereby killing most of the Ottoman officers. With the British raid on Siwa in February 1917, the Senussi riot was finally crushed.<sup>63</sup> While they had the ability to strike fast and in the rear of the enemy, the *Light Car Patrol* did not have to rely on the availability of sufficient water supplies, as it was the case with horses or camels. What is more, this special unit could build its tactics on already existing service regulations:

“We had evolved a system by which we could work cars like cavalry. [...] On that fine open country such a force, able to strike, and to strike hard and often at a distance of hundreds of miles; self-contained for a radius of several hundred miles and for weeks at a time, formed the best possible protection against further trouble with the western Arabs.”<sup>64</sup>

After the experiences gained in the First World War by 1940, the British *Long Range Desert Group* was founded. Its hit and run raids against German troops and their Italian allies proved to very effective. The special forces

“[...] gave the commanders of the British forces in North Africa a number of advantages not enjoyed by the enemy. They gave the British the ability to collect massive amount of intelligence from areas deep within the rear of the enemy front line positions, the navigational skills to guide large forces across the desert in outflanking operations, the means of transporting agents to points almost anywhere behind enemy lines, and the ability to mount wide-ranging raiding offensives.”<sup>65</sup>

Even though the German army was aware of the applicability of similar Guerilla tactics in the desert<sup>66</sup> the *Afrikakorps* was struggling with the British special forces operating in North Africa. Therefore the *Wehrmacht* handbook for desert warfare also contained a reference to the anti-partisan warfare regulations.<sup>67</sup> It is thus right to say that these tactics had an impact on the whole campaign, as a veteran of the *Light Car Patrol* stated: “Reading the description of General Wavell’s attack on Benghazi it appeared that he had followed the desert route pioneered and mapped by us twenty years earlier. Later on our investigation of the *Qattara Depression* may have been of use in the defence of Montgomery’s southern flank.”<sup>68</sup>

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<sup>63</sup> David Syrett, *The Eyes of the Desert Rats. British Long-Range Reconnaissance Operations in the North African Desert 1940-43*, Helion & Company, Solihull, 2014 p. 19; Claud H. Williams, Russell McGuirk (eds.), *Light Car Patrols 1916-19. War and Exploration in Egypt and Libya With the Model T Ford. A Memoir*, Silphium Press, London, 2013, pp. 52-59.

<sup>64</sup> Williams, McGuirk, *op. cit.*, pp. 239-240.

<sup>65</sup> Syrett, *op. cit.*, 307-308.

<sup>66</sup> Platz, “Die arabische Aufstandsbewegung 1917/18 und ihre Einwirkung auf den türkischen Palästina-Feldzug”, *Militär-Wochenblatt*, Vol. 122 No. 11, 1937, cols. 641-645.

<sup>67</sup> Oberkommando des Heeres (ed.), *Taschenbuch für den Krieg in Wüste und Steppe*, Reprint, Enforcer Pülz, Ubstadt-Weier, 2009, p. 17.

<sup>68</sup> Williams, McGuirk, *op. cit.*, p. 249.

Whereas the German army had neglected the lessons of desert warfare in the First World War, the British forces had carefully analyzed the desert campaigns against the Ottoman Empire. Taking everything into consideration, the Allied victory in North Africa was also due to the British “hard-won experience of almost 100 years’ fighting in India, Africa and the Middle East, melded with some of the lessons and technology of 1914-18.”<sup>69</sup>

## From Gallipoli to Normandy

### Turkish Lessons from Çanakkale

The battle for Çanakkale had been the biggest combined arms campaign of the First World War. However, as in the case of desert warfare the German side did not draw the right conclusions from this experience.<sup>70</sup> There were reviews independent from each other in the German army and navy, based on the German first-hand reports from the battlefield. However, these reports ignored the Turkish analysis of the battle.

The Turkish view on one of the major wartime successes of the Ottoman armed forces had formed late. In the first years of the Republic of Turkey, the battle for the straits was not seen as important as the war against Greece. However, the increasing glorification of Mustafa Kemal as one of the leaders of the Ottoman defense in 1915/16 and regaining of Turkish military control over the straits in 1936 changed the whole situation.<sup>71</sup> At this stage there were even diplomatic complications over the issue of the unmentioned German contribution to the battle of Gallipoli in a Turkish schoolbook.<sup>72</sup>

The Turkish military press also neglected the battle in the beginning.<sup>73</sup> In one of the first analyses, artillery captain Hakkı stated that the Turkish army needed a new heavy artillery service regulation, and that the defensive positions had to be made of concrete in order to withstand enemy shelling. Quite

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<sup>69</sup> Anglim, *op. cit.*, p. 603.

<sup>70</sup> Wolf, *op. cit.*, 204.

<sup>71</sup> Pheroze Unwalla, *Between Nationalism and Reconciliation: The Turkish Government and the Dual Narrativization of the Battle of Gallipoli, 1923-2007*, M.A. Thesis, Simon Fraser University, Burnaby/Canada, 2008, pp. 31-54.

<sup>72</sup> Veysel Şimşek, “‘Backstabbing Arabs’ and ‘Shirking Kurds’: History, Nationalism, and Turkish Memory of World War I”, Jonathan Vance et al. (eds.), *The Great War: From Memory to History*, Wilfrid Laurier University Press, Waterloo, 2015, p. 104. For the German critique of the schoolbook see Selim Deringil, *Turkish Foreign Policy during the Second World War: An ‘Active’ Neutrality*, Cambridge University Press, Cambridge, 1989, p. 60.

<sup>73</sup> The official historiography focused mainly on operational aspects of singular battles within the campaign. For the first overview see the General Staff’s publication *Cıban Harbinde Osmanlı Harekati Tarihi*, Vol. 1: *Çanakkale Mubarebatı* [History of the Ottoman Operations in the World War, Vol. 1: The Çanakkale Campaign], Matbaa-i Askeriye, Dersaadet [İstanbul], 1338/1922.

contrary to the German view, Hakkı maintained that the best defense against any landings on Turkish shores would be a strong navy, which could prevent any intentions in that direction.<sup>74</sup> The commander of the Turkish naval academy also analyzed the landing manoeuvres of the campaign. Mehmet Fahri Paşa came to a similar conclusion, pointing to the need of a modern and strong navy as the prerequisite for the attacking force to cover the landing phase.<sup>75</sup> The Ottoman coastal batteries and the shelling by enemy fleet had shown little effect on both sides. Therefore a modern defence at the Turkish straits should include long ranging ordnance with higher calibre and better coverage for the crews.<sup>76</sup> Mehmet Fahri also pointed to the increasing abilities of the airplane, the American tank landing experiments and to the opportunities of artificial harbours in future wars. For him the Turkish army and navy had to develop a common defensive strategy in the next years.<sup>77</sup> One year later, a retired Turkish captain saw the idea of building half fortified and inflexible batteries at the Dardanelles as a wrong decision made by German instructors. Fortresses could never keep up with the fast developments in modern warfare, therefore, the defense had to be more flexible. In the case of the straits, the (German) fortress strategy had proven successful. Nonetheless, this approach was not seen as transferable to every geographic location.<sup>78</sup> In addition, Captain Nizamettin also warned to have enough reserves at hand to counter any paratrooper landing attempts in the rear of the line of defense.<sup>79</sup> For defensive measures against invasions by the sea, the Turkish army even developed pictorial instruction materials to teach the modern way of coastal defense.<sup>80</sup> In those regards, the Turkish debate was far ahead of the German ideas on the defense of coastal areas. Due to the language barrier, Turkish warnings had no influence on the German concept, which was only based on German experience and British

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<sup>74</sup> Hakkı, “Topçu Atış Mektebindeki Konferanslardan: Asri Müstahkem Mevki ve Sahil Tahkimatı Nasıl Yapılmalıdırlar?” [From the Conference at the Artillery School: How do Modern Fortified Positions and Shore Fortifications have to be made?], *Topçu Mecmuası* Vol. 7 No. 74, 1931, pp. 23-25.

<sup>75</sup> Mehmet Fahri, *Çanakkale Muharebelerinden Çıkartma Hususunda Alınan Dersler* [Lessons drawn from the Battle of Çanakkale about the Landings], Harp Akademisi Matbaası, Yıldız [İstanbul], 1933, p. 24.

<sup>76</sup> Fahri, *op. cit.*, pp. 20, 26.

<sup>77</sup> Fahri, *op. cit.*, pp. 30-31, p. 37.

<sup>78</sup> Nizamettin, “Büyük Harpte Çanakkale’ye Yapılmış Olan Büyük Deniz Zorlaması ve Bundan Bugün için Alınacak Öğütler” [The Big Naval Attack on Çanakkale during the Great War and Advice to be taken from it for Today], *Topçu Mecmuası*, Vol. 10 No. 95, 1934, pp. 20-21.

<sup>79</sup> Nizamettin, *op. cit.*, p. 26.

<sup>80</sup> See the pictured lesson guide for artillery and infantry units in Orhan Ergüden, “Sahil Müdafaası” [Coastal Defense], *Piyade Mecmuası* Vol. 10 No. 98, 1936, pp. 7-10.

evaluations.<sup>81</sup> In retrospect, the negligence of the former ally's ideas regarding coastal defence would turn out to be a grave mistake.

### **Making Sense of Gallipoli: The Split of German Postwar Coastal Defence Doctrine**

For Germany, Gallipoli had been the biggest shore defence operation of the war, regardless of the fact that the battle had taken place in a rather exotic and remote theater of war. The development of the existing German coast and land defences was restricted since 1919. The first modern fortresses were only built after 1935 with the unilateral cancellation of those regulations. Therefore the German army had to focus on the theoretical evaluation of the battle for the Dardanelles.

The army decided to focus on mobile and flexible artillery batteries. The standard work on this issue referred to Hans Wehrle's 'flying batteries' during the Gallipoli campaign.<sup>82</sup> Klingbeil did not focus on the Ottoman defenders. Solely the German side was important for his study. In his general assessment of the campaign, he pleaded for flexible artillery units moving between prepared firing positions, since Germany was not allowed to maintain heavy artillery because of the Versailles Treaty. The German coast defenses were not to be made of concrete since they were vulnerable to heavy ship artillery shelling. Moreover flexibility was of paramount importance, supported by reserve troops in the hinterland out of the reach of the enemy's naval artillery.<sup>83</sup>

On the contrary, the German navy drew entirely different lessons from the Çanakkale campaign. At the navy's coast artillery school, the Ottoman victory in Gallipoli had proven the superiority of coastal defenses and the difficulty of the enemy's naval artillery to destroy them. There had been a rain of shrapnell on the defenders that had even penetrated the fort's earthwork. In 1917 the Germans even brought a heavy naval coastal battery to Canakkale in order to shell the island of Imbros (Gökçeada). The Allied fleet had to withdraw to the other side of the island and therefore could not prevent Ottoman naval operations south of the Dardanelles. The experience in the defence against British landing attempts in Flanders in 1917 had also proven the superiority of land based naval artillery.<sup>84</sup> The debate was also conducted in the main German military periodical, the *Militär-Wochenblatt*. Erich Klingbeil repeated his favor for

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<sup>81</sup> See the review of the British official work of the Gallipoli campaign in Felix Guse, "Amtliche Geschichte des Gallipoli-Feldzuges: 1. Band," *Militär-Wochenblatt* Vol. 111 No. 6, 1929, cols. 219-220.

<sup>82</sup> Erich Klingbeil, *Küstenverteidigung und Küstenbefestigung im Lichte der Weltkriegserfahrungen*, Offene Worte, Charlottenburg [Berlin], 1921.

<sup>83</sup> *Ibid.*, 27.

<sup>84</sup> Wilhelm von Harnier, *Artillerie im Küstenkampf*, J.F. Lehmanns, München, 1969, pp. 8-9, p. 17.

the army's dominance in the coast defence and pointed to the dangerous dispersion of the own forces, if the whole coastline would be secured by fortifications. In a future war, the army, navy and airforce were to cooperate in the defence of the national shores. Pointing to several examples from the German war campaigns, for the Major General, the Ottoman defense in 1915 was still quite impressive, since "[...] *the Turks had only quite old installations with high walls [protruding from the surrounding ground] that were easily identifiable and had to conduct the defensive fight with insufficient supplies of ammunition and unarmored batteries.*"<sup>85</sup> However, at this point of time the German navy had already drawn conclusions of its own.

### **From Gallipoli to Overlord: Failed Application in Occupied France, 1940-1944**

After the fall of France in 1940, on Hitler's decision, the German High Command had ordered to fortify the whole Atlantic coastline, from the Spanish border to the Arctic circle in Norway. The army's model for this megalomaniac project, the so-called *Atlantikwall*, had been the building of the fortifications along the German Western border (the *Westwall*, built from 1935 onwards).<sup>86</sup> Colonel Erhard Raus elevated the case of Gallipoli as a positive example of the defense of isthmuses. It seems that this experience was also applied to the French coast where the German navy was too weak to participate in the defense:

"Isthmuses between seas were unconquerable if their flanks were protected by superior air or naval forces. Enemy landings could be repulsed by heavy artillery and aircraft or hindered by mobile reserves even if one's own naval forces had been defeated. Thus, for instance, the isthmus defended by the Turks on the Gallipoli peninsula in World War I could not be taken by the British despite the support of their superior battle fleet and air force."<sup>87</sup>

During the first years of the *Atlantikwall* construction, "*the German High Command only had a limited experience in coastal defense.*"<sup>88</sup> This resulted in a piecemeal building program especially at the French Atlantic coast. There had been continuous arguments between the army, navy and the paramilitary construction corps *Organisation Todt*, which was responsible for building massive

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<sup>85</sup> [Erich] Klingbeil, "Küstenbefestigungen," *Militär-Wochenblatt*, Vol. 121 No. 24, 1936, col. 1317.

<sup>86</sup> Christoph Tempel, "Kurze Beschreibung der Geschichte des Westwallbaus in den Jahren 1938-1945", Eberhard Elfert et al. (eds.), *Wir bauen des Reiches Sicherheit: Mythos und Realität des Westwalls, 1938-1945*, Argon, Berlin, 1992, pp. 9-31.

<sup>87</sup> US NARA HD T-010, Erhard Raus, *German Defense Tactics against Russian Breakthroughs*, 1951, p. 156.

<sup>88</sup> US NARA HD A-895, R[udolf-Christoph] von Gersdorff, *Critique of the Defense against Invasion*, 1945, p. 2.

bunkers. Earlier warnings regarding the enemy's mistakes in the planning of the 1915 invasion, namely, that "‘too many cooks spoil the broth’, and what is the result of ‘amateur strategists’ exercising a decisive influence on the supreme conduct of war’"<sup>89</sup> were neglected in this case. Regarding the construction of beach defences, the description given by Carl Mühlmann on the Ottoman measures also applied to France:

“Machine guns and single canons, arranged to be invisible from the sea, covered the shore strips. Behind the first trench were infantry strongpoints within mutual firing range. Barbed-wire obstacles sunk into the shallow water at single positions were intended to keep the landing enemy within shooting range, anti-personnel mines were to inflict casualties when the enemy went ashore. In order to enable the troops to maintain their coastal positions for longer time and to be independent from supplies, everywhere small ammunition and food depots were erected. Medical care facilities were not neglected.”<sup>90</sup>

However, just like in 1915, German estimations of a possible allied invasion zone had been wrong and the Allies did their best to conceal their operational plans. In the case of the Atlantikwall, the whole French coastline had to be defended, and this resulted in a total fragmentation of the German defence forces. The obstacles on the beach could not prevent the landing of enemy forces. Even the most advantageous time for a landing was miscalculated:

“The enemy invasion was hindered more by coastal field obstacles (hedgehogs, dragons’ teeth, pile-driver rafts, underwater mines, roll mines, etc.), the construction of which suffered, however, from lack of experienced men and materials; which in the beginning, were built under the assumption that the invasion would be made at tide time only.”<sup>91</sup>

The German High Command was aware that, after the experience in Gallipoli, a quick victory within the first days of the invasion was essential: “*The*

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<sup>89</sup> Otto Welsch, “Das Gallipoliwunder oder die Schlacht der verpaßten Chancen,” *Wissen und Wehr*, Vol. 16 No. 7, 1935, pp. 74-76, p. 95. Regarding Hitler's ignorance in the face of a possible Allied invasion in March 1944 see Andreas Hillgruber, *Staatsmänner und Diplomaten bei Hitler: Vertrauliche Aufzeichnungen über Unterredungen mit Vertretern des Auslandes. Vol. 2: 1942- 1944*, Bernard & Graefe, Frankfurt am Main, 1970, p. 390.

<sup>90</sup> Carl Mühlmann, *Der Kampf um die Dardanellen, 1915*. Gerhard Stalling, Oldenburg/Berlin, 1927 p. 86. Unfortunately, the 1943 report of a delegation visit of the Turkish General Staff to a section of the Atlantikwall in Northern France, could not be traced in the ATASE archives. For the journey see Rifat N. Bali, “Ordu Komutanı Orgeneral Cemil Cahit Toydemir’in Almanya Gezisi: Hitler ile Görüşme” [The Germany Tour of General Cemil Cahit Toydemir: Meeting with Hitler], *Toplumsal Tarih*, No. 165, 2007, pp. 38-42.

<sup>91</sup> US NARA HD B-021, Fritz Ziegelmann, *352nd [German] Infantry Division. Special Questions (Normandy)*, 1946, p. 4.

*guiding principle was that the enemy must be defeated on the beaches within three or four days after the initial landing. If this failed, all would be lost.*"<sup>92</sup>

For the German staff officers it was obvious that the German defensive forces had lacked unified command similar to the one the Allied invasion army had possessed in 1915.<sup>93</sup> After four years of war the German navy could not assist in the defense of the coastline. The German airforce was understrength in the summer of 1944. On the ground, like in the Ottoman case in the past, due to production shortages, not all of the German shore batteries were equipped properly to defend fast moving enemy water craft.<sup>94</sup> Moreover, the quality of the Germans troops had deteriorated dramatically by 1944. The German bunker troops and the reserve troops in the hinterland were not newly drafted as the Ottoman units, which had already served approximately five months in 1915. Most of the *Wehrmacht* and *Kriegsmarine* garrison troops consisted of World War One veterans, most of them unfit for service, and young and inexperienced soldiers: "To me, as an old soldier who has passed through the first World War, acting as a battery- and battalion commander in the artillery, it seemed as if these young soldiers could not stand the artillery fire of the enemy as easily as those who had taken part in the first World War."<sup>95</sup>

### **The Progress of Military Technology since Gallipoli**

The disaster of the Gallipoli campaign was studied extensively by the Royal Navy and later the US Navy as well as the US Marine Corps. The British Navy had developed an instruction manual for combined army and navy operations, also using the 1915 experiences before anything comparable was undertaken by the German armed forces. Furthermore, the accuracy of naval artillery was improved to increase the damage of enemy shore batteries. The Royal Navy also developed a new generation of armored landing ships that offered enhanced protection for the landing party under enemy fire.<sup>96</sup> The US Navy also showed considerable interest in the battle for the straits, even though the United States had not participated in this operation due to their late entry into World War One. The first English translation of Liman von Sanders' memoirs

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<sup>92</sup> US NARA HD B-234, Max Pemsel, *Preparations for Invasion. Foreword by [U.S.] Captain George Blanchard*, 1946, 3. See also the 1941 order Cf. the 1941 Wehrmacht High Command order for an early prevention of any enemy landing attempt in Rudi Rolf, *Der Atlantikwall: Die Bauten der deutschen Küstenbefestigungen, 1940 1945*, Biblio, Osnabrück, 1998, p. 82.

<sup>93</sup> US NARA HD B-720, Leo Geyr von Schweppenburg, *The Theory behind Troop Dispositions in France. Commentary to Speidel, Hans: Rommel's Views (1 Apr.-May 1944)*, 1947, p. 11.

<sup>94</sup> US NARA HD B-663, Ernst Goettke, *Coast Artillery- Atlantic Wall*, 1947, p. 22.

<sup>95</sup> US NARA HD B-260, Gerhard Triepel, *Fighting on the Cotentin Peninsula, with Special Reference to the Coast Artillery: Cotentin Artillery (6-18 Jun. 1944)*, 1946, p. 10.

<sup>96</sup> Ian Speller, "In the Shadow of Gallipoli? Amphibious Warfare in the Interwar Period", Jenny Macleod (ed.), *Gallipoli: Making History*, Frank Cass, London, New York, 2004, pp. 141-142.

was published by the Naval Institute Press in 1927. Together with other operations, especially by Japan, the main prospective US adversary in the late 1930s, Gallipoli served as one of the models for the development of a modern U.S. Navy landing doctrine.<sup>97</sup>

In the special situation of the German occupation of France, the divided command of the German Wehrmacht and Kriegsmarine played into the hands of the Allied planning. Unlike the Ottoman troops at Gallipoli, the German troops defended foreign soil and were the occupiers. Allied military intelligence made use of the French Résistance movement in the campaign, an advantage the Entente could not enjoy back in 1915.<sup>98</sup> It is also interesting to note that most of the ordnance systems and small arms (regarding the bolt-action rifles, namely, the British SMLE and the German Mauser system) were used in both campaigns.<sup>99</sup> Despite these similarities, military reconnaissance technology had undergone rapid development between the wars. While the state of Ottoman fortification works had been uncertain for the Entente in 1915, the Allies had high-resolution photographs of the German defences at their disposal in 1944. Preparations on both the Allied and German sides took much longer and were technically more sophisticated than at the beginning of the First World War. In addition to the armored landing ships, amphibious tanks had been built especially for this operation to support the landed infantry. Finally, the landed Allied infantry units were much more specialized in assault techniques than their British, French and ANZAC predecessors had been.<sup>100</sup> Therefore also a contemporary Turkish military historian acknowledged the “*much more thoroughly prepared*” amphibious operations of the Second World War.<sup>101</sup> Even for the

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<sup>97</sup> Ibid., p. 146. Cf. in this regard also the study “[t]o examine the methods used in defense against landing operations as illustrated by the Turkish defense of Gallipoli” by one of the Allied D-Day army commanders; George Smith Patton, *The Defense of Gallipoli. A General Staff Study*, Headquarters Hawaiian Department, Fort Shafter, August 31, 1936.

<sup>98</sup> Robin Higham, “Weapons Old and Weapons New: Technology at D-Day”, Deutsches Marine-Institut (ed.), *Seemacht und Geschichte: Festschrift zum 80. Geburtstag von Friedrich Runge*, MOV, Bonn, Bad Godesberg, 1975, pp. 123–132, p. 130.

<sup>99</sup> Ibid., p. 131.

<sup>100</sup> Peter Chasseaud, “Comparison with D-Day, 1944”, Id./ Peter Doyle (eds.), *Grasping Gallipoli. Terrain, Maps and Failure at the Dardanelles, 1915*, Spellmount, Staplehurst, 2005, pp. 265–269. See also Rupert Hamer, “D-Day in Normandy and Suvla Bay”, *Sabertache* No. 39, 1998, pp. 3–9 and for the more realistic infantry combat training for the initial phase of the landings Geoffrey Till, “Hitting the beach. The amphibious experience”, Peter Liddle, John Bourne, Ian Whitehead (eds.), *op. cit.*, pp. 180–200, pp. 184–186.

<sup>101</sup> Komut, Ziya: I. Cihan Harbinde Çanakkale ve Baltık Çıkarmaları ile II. Cihan Harbinde Şimali Afrika ve İtalya Çıkarmalarının Mukayesesi. 139 Sayılı Askerî Mecmuaya Lâhikadır [Comparison of the Çanakkale and Baltic Landings in the First World War and the Landings in North Africa and Italy in the Second World War. Supplement to the Military Journal No. 139]. İstanbul: Askerî Basımevi, 1946, p. 44.

German commanding officer in Northern France “[t]echnically and strategically the landing in Normandy was a brilliant achievement of the first magnitude.”<sup>102</sup> The preparations for ‘Operation Overlord’ had been a mixture of old and new tactics, technologies and weapons. In this regard it was a “successful Gallipoli due to better planning and shorter distances.”<sup>103</sup>

### **Disproval of the German Doctrine during the ‘The longest Day’**

The diverging ideas of coastal defense proved to be a big obstacle to the defense of Normandy shores. Admiral Theodor Krancke complained about the Wehrmacht’s wrong doctrine, clearly drawn from Hans Wehrle’s flexible defense:

“The apparently complicated organization of the coastal defense was preconditioned by the attitude of the Army whose ideas were mainly directed toward the conception of land warfare. The firing against quickly movable sea targets requires, however, methods of firing, and formations of Batteries that are different from those for land battle. The Heer was accustomed to fire indirectly from covered gun positions and did not consider the location of the [Navy’s] coastal batteries near to the shore for direct firing to be a solution forced on us by new conditions but regarded the idea as obsolete. But when fighting took place against quickly moving sea targets, especially in the case of a landing, direct aiming at the targets should be feasible.”<sup>104</sup>

Another former Kriegsmarine admiral also accused the Wehrmacht of disregarding obvious lessons from the Dardanelles campaign:

“The circumstances of combat at the Dardanelles were completely different from the landing battles of World War Two, and they were of no use as an experience basis for the latter. The major positive experience [from Gallipoli], that landings had to be opposed by operative army forces, was not part of the navy’s evaluation area of responsibility. It was not considered sufficiently by the German Wehrmacht under the constraints of war.”<sup>105</sup>

At the Normandy shores the German Navy faced the problem that the enemy fleet had drawn their lessons out of the “primitive-naive conduct of the Allied ships in front of the Dardanelles”.<sup>106</sup> In 1944 the Allies made use of smoke screens and deception tactics to interfere with the German radio ranging technique. Similarly to the Wehrmacht, the Kriegsmarine also drew the wrong conclusions

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<sup>102</sup> Lucie Rommel, Basil Henry Liddell Hart (eds.), *The Rommel Papers*, Basil Henry, London, 1953, p. 522.

<sup>103</sup> Higham, *op. cit.*, p. 123.

<sup>104</sup> US NARA HD B-169, Theodor Krancke, *Naval Group West in Defense against the Allied Landing: of Historical and Technical Interest*, 1946, pp. 9-10.

<sup>105</sup> Wilhelm von Harnier, “Küstenartillerie und Atlantikwall,” *Marine-Rundschau* Vol. 52 No. 4, 1955, pp. 91-92.

<sup>106</sup> *Ibid.*, p. 92.

from the Gallipoli campaign. The Wehrmacht criticized the immobile navy command and artillery posts in the first line of defense, since for them, “[...] *the Navy believed itself onboard a warship on the high seas [...] trusting their heavily armed bunkers.*”<sup>107</sup> The Kriegsmarine defence plan generated “[f]he belief that the concrete fence all around the coast would prevent anyone from landing on it.”<sup>108</sup>

In the end both the Wehrmacht and the Kriegsmarine were wrong in their assumptions. Allied air superiority had made a flexible defense difficult and the German reserves arrived too late in the invasion area. The Kriegsmarine bunkers failed to repel the Allied naval landings and proved useless when attacked from the rear by commando units and paratroopers. Field Marshal Rommel was only able to watch how the landed Allies “*shattered my formations with their artillery, tanks and air force. My men went to their death in their thousands, [...] in a battle that could not be won.*”<sup>109</sup>

## Conclusion

During the interwar years, the campaigns of the First World War were analyzed in all three armies, albeit to a varying degree. The Turkish military press pointed to the difficulties of war in the desert. During the campaigns in the Sinai desert and in Palestine, supply and medical care had been two of the mayor challenges. In Germany, the lessons of desert warfare were neglected. On the contrary, the British armed forces evaluated the desert campaigns of the First World War carefully. The German misreading of defensive measures in the battle of Çanakkale contributed to the military failure in 1944, whereas the British armed forces applied the knowledge gained during the war against the Central Powers to a much higher degree. The application of these lessons contributed to the Allied victory in the Second World War. The Turkish political leadership had learned its main lesson from its past alliance with Imperial Germany and abstained from entering the Second World War. The Turkish armed forces thus concentrated on defensive measures, as it became evident in the analysis of the defense of the straits. It also has to be stated that neither on the Allied nor on the German side the experiences of desert warfare and amphibious operations had been the main driving force behind the development of a modern doctrine. It was, especially in the case of the invasion in Normandy in 1944, rather a combination of wartime and interwar experiences.<sup>110</sup> Admittedly, the technology also had evolved during the 29 years

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<sup>107</sup> US NARA HD A-895, *op. cit.*, 10.

<sup>108</sup> US NARA HD B-652, Günther Blumentritt, *Effect of Fortifications on Strategic Planning*, 1947, 33. Cf. also Hans Wegmüller, *Die Abwehr der Invasion. Die Konzeption des Oberbefehlshabers West 1940-44*, Rombach, Freiburg, 1979, pp. 122-130.

<sup>109</sup> Rommel, Liddell Hart, *op. cit.*, p. 524

<sup>110</sup> Speller, *op. cit.*, p. 148.

since Çanakkale and the campaigns in the desert. Taking everything into consideration, it was for the better, that the German armed forces during the Second World War did not apply the lessons of the past and thus were not victorious in both campaigns.<sup>111</sup>

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<sup>111</sup> Martin Küppers, Klaus-Michael Mallmann, “Elimination of the Jewish National Home in Palestine’: The Einsatzkommando of the Panzer Army Africa, 1942”, *Yad Vashem Studies*, Vol. 35 No. 1, 2007, pp. 111-141, and Winfried Mönch, “Invasion und Holocaust”, *op. cit.*, pp. 194-200.

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