

THE FLASH OF THE DAGGER AND THE THUNDER OF THE GRENADE: A
COMPARATIVE STUDY OF ITALIAN *ARDITI* UNITS AND GERMAN
STURMTRUPPS FORMATIONS IN WORLD WAR I

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Military History

by

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ABSTRACT

THE FLASH OF THE DAGGER AND THE THUNDER OF THE GRENADE: A COMPARATIVE STUDY OF ITALIAN *ARDITI* UNITS AND GERMAN *STURMTRUPPS* FORMATIONS IN WORLD WAR I, by Major Alessio Battisti, 336 pages.

This thesis offers an account of the German *Sturmtruppen* and the Italian *Arditi* units of the Great War. The German answer to the issue of attrition encompassed the establishment of a new kind of assault unit, the *Sturmtruppen*. In turn, this outfit was crucial in the development and implementation of a new offensive doctrine that enabled the German military organization to overcome the *impasse* of the trenches. Similar units, the *Arditi*, appeared in the ranks of the Royal Italian Army as the solution to the same problem. Over time the *Sturmtruppen* received a significant amount of attention by the military historians investigating the doctrinal innovation process carried out by the German military institutions during the First World War. In contrast, very little has been written about the *Arditi* outside the scope of Italian military literature. This thesis aims at addressing this gap, not by simply providing a detailed account of the *Arditi*, but rather through a comprehensive comparative analysis of the German and Italian shock troops of World War I. In this way, it is possible to depict the Italian assault formations in the framework of standards already set by their German equivalent in military history.

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I would like to thank my wife, Valentina, for her unconditional assistance during this journey. I could not have succeeded without her.

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Finally, I would like to pay tribute to the Soldiers that sacrificed their life for Italy during the First World War, as well as in all the other conflicts and operations. May your memory live forever. Most recently, different circumstances brought Alessio and Marco to join their cohort in the paradise of warriors. Blue skies Brothers.

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ACRONYMS

AOK	<i>Armeeoberkommando</i> (Austro-Hungarian Army Supreme Command)
AVF	<i>Ausbildungs-vorschrift der Fusstruppen</i> (German Training Manual of the Foot Troops)
DLF	<i>Direzione Lanciafiamme</i> (brand name of a model of Italian-made flamethrower)
DOTMLPF	Doctrine, Organization, Training, Materiel, Leadership and Education, Personnel, and Facilities
HE	High Explosive
HQ	Headquarters
MCoE	Maneuver Center of Excellence
MP	Military Police
NATO	North Atlantic Treaty Organization
NCO	Non-Commissioned Officers
OHL	<i>die Oberste Heeresleitung</i> (German Army High Command)
OVP	<i>Officine Villar Perosa</i> (brand name of the standard-issue Italian submachine gun model)
SA	<i>Sturmabteilung</i> (Assault Detachment)
TTP	Tactics, Techniques, and Procedures
UK	United Kingdom
US	United States of America

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CHAPTER 1

INTRODUCTION

The First World War is a critical milestone in the history of the “Western Way of War.”¹ The historians Williamson Murray and McGregor Knox recognize the unique and revolutionary nature of this conflict that “combined the legacies of the French and Industrial Revolutions and set the pattern for the twentieth-century war.”² During this dark chapter in the history of mankind, the military organizations of the belligerent states implemented a wide array of material, organizational and doctrinal solutions to cope with the challenges typical of a kind of warfare without precedents.³ All the players of this new and lethal game broke the fragile seals of peace pushed by strong nationalist sentiments. They shared the belief that a swift and decisive action, enhanced by the increased lethality of new technologies, would be the key to victory, following the common trend established by the Prussian Wars of Unification and the Russo-Japanese War.⁴ In reality, the European nation-states were about to open the proverbial Pandora’s

¹ Geoffrey Parker, “Introduction: The Western Way of War” in *The Cambridge Illustrated History of Warfare*, ed. Geoffrey Parker (Cambridge, UK: Cambridge University Press, 2017), 2-9.

² Williamson A. Murray and McGregor Knox, “Thinking about revolutions in warfare,” in *The Dynamics of Military Revolution, 1300-2050*, ed. McGregor Knox and Williamson Murray (Cambridge, UK: Cambridge University Press, 2003), 6.

³ Michael Howard, “Men against Fire: The Doctrine of the Offensive in 1914” in *Makers of Modern Strategy: from Machiavelli to the Nuclear Age*, ed. Peter Paret (Princeton, NJ: Princeton University Press, 1986), 526.

⁴ Howard, “Men against Fire,” 511-522. See also Stephen Bull, *Stosstrupptaktik: German Assault Troops of the First World War, the First Stormtroopers* (Brimscombe Port, UK: Spellmount, an imprint of The History Press, 2014), 1-2.

box, unleashing horrors of such brutality to leave an indelible scar in the collective conscience of the western civilization. Nonetheless, World War I remains one of the most significant chapters in the history of modern warfare from a military evolutionary perspective. This conflict engendered critical breakthroughs, including the development of the concept of modern combined arms, the birth of strategic bombing, the first examples of signal intelligence, together with the introduction of carrier warfare, submarine warfare, and amphibious warfare.⁵

The necessity to overcome the critical dilemma posed by trench warfare was one of the main, if not the main, drivers of this wave of innovation throughout the ranks of the military institutions involved. This process was fueled by an unyielding sense of determination to prevail over the opponents and a fatalistic acceptance of substantial losses. Both principles were clear indicators of the strong nationalistic sentiments driving the armies of that time.⁶

On the one hand, the British and the French armies primarily focused their efforts on the development of material solutions, harnessing the technological advancements of their industrial apparatus with the backing of their entire country systems. The first prototypes of tanks are the most vivid example of that.⁷ On the other hand, Germany and

⁵ Murray and Knox, "Thinking about revolutions in warfare," 13.

⁶ Howard, "Men against Fire," 521-522.

⁷ Jonathan M. House, *Toward Combined Arms Warfare: A Survey of 20th-Century Tactics, Doctrine, and Organizations*. Research Survey No. 2 (Fort Leavenworth, KS: Combat Studies Institute, 1984), 28-29. See also Williamson Murray, "Armored Warfare: The British, French and German experiences" in *Military Innovation in the Interwar Period*, ed. Alan Millet and Williamson Murray (Cambridge, UK: Cambridge University

Italy chose to follow the path of organizational change for a wide variety of reasons linked to their military culture, resource availability, and the level of the technology at their disposal. The creation and the evolution of specialized assault units represented the German and Italian answer to the military problem posed by the deadlock of the trenches. More specifically, the German solution encompassed the establishment of the *Sturmtrupps*,⁸ in the broader process of development and implementation of a new offensive doctrine that enabled the military organization to overcome the *impasse* at hand.⁹ Similar units, the *Arditi*,¹⁰ appeared in the ranks of the Royal Italian Army with the exact same purpose.¹¹

Press, 1998), 6; Graeme C. Wynne, *If Germany Attacks: The Battle in Depth in the West* (Westport, CT: Greenwood Press, 1976), 57-58.

⁸ The German assault units were known as *Sturmtrupps*, that can be translated as “storm troops,” as well as *Stosstrupps*, whose translation can be defined as “shock troops.” Hereinafter I will use both terms to refer to this specific kind of military formation.

⁹ Timothy T. Lupfer, *The Dynamics of Doctrine: The Changes in German Tactical Doctrine During the First World War*. Leavenworth Papers No. 4 (Fort Leavenworth, KS: Combat Studies Institute, 1981), 43-44. See also House, *Toward Combined Arms Warfare*, 43-44; Bull, *Stosstrupptaktik*, 85-86.

¹⁰ The term *Arditi* can be translated as “Audacious Men.” From this point on, the Italian term is used to refer to the Italian assault units of the Great War.

¹¹ Basilio Di Martino and Filippo Cappellano, *I Reparti d’Assalto Italiani nella Grande Guerra (1915-1918)* [*The Italian Assault Units in the Great War (1915-1918)*] (Rome, Italy: Stato Maggiore dell’Esercito in collaboration with Rodorigo Editore, 2016), 1:65. See also Angelo L. Pirocchi, *Arditi: Le truppe d’assalto italiane (1917-1920)* [*The Arditi: the Italian assault troops (1917-1920)*] (Gorizia, Italy: Libreria Editrice Goriziana, 2011), 1; Paolo Morisi, *Hell in the Trenches: Austro-Hungarian Stormtroopers and Italian Arditi in the Great War* (Warwick, UK: Helion & Company Limited, 2018), v, x-xi, Kindle.

This thesis focuses on the German and the Italian assault units of the Great War. This work starts with an illustration of the origins, force structure, training, equipment, and tactics of each formation. Furthermore, this dissertation provides a presentation of the comparative analysis between the selected outfits. The German *Stosstrupps* are the most renowned of all the shock troops among the European armies of World War I. In fact, the assault tactics that they introduced are still studied today. While on the international stage multiple historical studies and books have been written in the English language about these innovative units of the German Army, very little is known about their Italian counterparts.

The Italian Army recognizes the *Arditi* units as the precursors of its Special Operations Forces. As an Italian officer serving in this branch, I have always been interested in expanding the knowledge of the military tradition that gave birth to this specialty. However, as I delved deeper into this quest, I felt more and more compelled to define the role of the *Arditi* in the unique perspective of the evolution of offensive tactics that occurred in the Great War. Considering the shared belief among historians that the German Army was the first to bring forth this kind of innovation, I realized that the key to attaining this goal dwelled in understanding how the Italian *Arditi* differed from their German counterparts.

With my primary research question clear, I examined the supporting secondary requirements. First, I had to research how and why the German *Sturmtrupps* were created, what was their specific organization, the nature of their selection and training, and the legendary tactics they employed so successfully on the battlefield. Secondly, I

had to go through the same process for the *Arditi*. This knowledge was a necessary prerequisite for performing the intended compare and contrast analysis.

I oriented my research to gather relevant information on the Italian *Arditi* and German *Sturmtrupps* through primary and secondary written sources. The preconditions for effective comparative analysis, indispensable to draw the due conclusions of the overall study, clearly lay in the acquisition of enough information to develop a solid grasp of the Italian and German assault units. In this respect, it is important to underscore two points. First, the research on the *Stosstrupps* largely depended on the work of the historians Bruce I. Gudmundsson and Martin Samuels. Both provide extensive analysis of the German shock troops, relying on a wide array of primary sources in the original language. Moreover, either source reports meaningful considerations related to the doctrinal and organizational domains. Since I am not a German speaker, the consultation of primary sources reverted around intelligence reports of the American Expeditionary Forces or the British Army. The research also included “classics” of the military literature available in the English language, such as *Storm of Steel*, by Ernst Jünger.¹²

Second, the research on the *Arditi* implied the consultation of a wide variety of primary sources, mainly treatises or memoirs written by officers that fought in the Italian assault units. One of the primary references was the book *Le truppe d'Assalto Italiane* (*The Italian Assault Troops*) by Salvatore Farina, an Italian officer that served in the

¹² Ernst Jünger, *Storm of Steel*, trans. Michael Hofmann (New York, NY: Penguin Books, 2004).

Arditi during the Great War.¹³ This book offers one of the most complete and accurate accounts of the *Arditi* during World War I, studying this phenomenon in depth under a military point of view.¹⁴ The research on the Italian assault units did not involve a direct consultation of the official archives of the Italian Army.¹⁵ This shortfall was balanced by the study of comprehensive secondary sources, displaying copies of the main archival documents regarding the establishment and development of the *Arditi*. The primary reference in these regards is the work *I Reparti d'Assalto Italiani nella Grande Guerra (1915-1918)* [*The Italian Assault Units in the Great War (1915-1918)*], written by the historian Basilio Di Martino and Filippo Cappellano, both superior officers of the Italian armed forces.¹⁶

The value of this project to the contemporary military professional is twofold. First, this study will give to the Italian Army military community, and more specifically to the Special Operations readers, a way to know more about one of the high points of the Italian military tradition in World War I, exploring the birth and the development of the *Arditi* under a different perspective. Indeed, the juxtaposition with the genesis of the

¹³ Salvatore Farina, *Le truppe d'Assalto Italiane* [*The Italian Assault Troops*], ed. Federico Cavallero (Milan, Italy: La Libreria Militare, 2005).

¹⁴ Giorgio Rochat, *Gli Arditi della Grande Guerra: origini, battaglie e miti* [*The Arditi of the Great War: Origins, Battles and Myths*] (Gorizia, Italy: Libreria Editrice Goriziana, 2018), 18-19.

¹⁵ The research for this thesis was conducted in the United States, during the attendance of the US Army Command and General Staff Officer Course. Therefore, the author did not have the possibility of traveling to Italy to access the Italian Army Historical Archives.

¹⁶ Di Martino and Cappellano, *The Italian Assault Units in the Great War (1915-1918)*, vols. 1-2.

German *Sturmtrupps*, a unit that gained his place in history, gives this study a unique connotation. The Italian military literature includes a large array of studies and books on the *Arditi*, but very little can be found in terms of comparative analysis with their German counterparts.

Second, this project will introduce the Italian assault units to the United States (US) military public, and hopefully to the modern anglophone military audience, not by merely describing their history and their feats of arms, but deliberately portraying the *Arditi* against a milestone of the military history of the Great War, the German *Sturmtrupps*. Most of all, this thesis intends to offer a humble contribution to military history through a comprehensive analysis of the German and Italian shock troops of World War I. This will enable the reader to gauge the strengths and weaknesses of the *Arditi* formations in the framework of standards set by the *Stosstrupps* during the Great War.

The structure of this thesis reflects the script of the conducted research, following a logical path that naturally brings the reader to the compare and contrast analysis and the conclusion. Chapter Two focuses on the definition of the conditions that led to the establishment of specialized assault units both in the German and the Italian Army. This chapter is a stage setter, aimed at defining the military problem of attrition and positional warfare, including the different connotations it displayed on the Western¹⁷ and the Italian

¹⁷ In November 1914, after the failed German attempt to penetrate the French defensive line, pushing their main effort through the neutral State of Belgium, as conceived by the famous “Schlieffen-Moltke Plan,” the opposing forces (the German Army against the French Army and the British Expeditionary Force) consolidated their positions along a 500-mile front that spanned from Switzerland to the English Channel. See Williamson A. Murray, “The West at War (1914-1918), in *The Cambridge*

fronts.¹⁸ Chapter Three is dedicated entirely to the *German Sturmtrupps*, depicting their origins, military structure, the selection and training of their personnel, their equipment, and tactics. Chapter Four presents the Italian *Arditi*, following the same criteria used in the previous one. In consideration of the limited number of English sources on this topic, this chapter will provide a more in-depth description of the Italian assault troops than the one provided for the *Stosstrupps* in the third chapter. This approach is in line with the intention of introducing the *Arditi* to the US military professionals in the attempt to provide them with a complete reference on this topic. Chapter Five covers a comparative analysis proposed along the main points used earlier to describe the German and Italian assault units. Finally, Chapter Six illustrates the conclusions in terms of general considerations, lessons for the modern military reader, and opportunities for further research.

Illustrated History of Warfare, ed. Geoffrey Parker (Cambridge, UK: Cambridge University Press, 2017), 266-270.

¹⁸ On August 4, 1914, at the onset of the Great War, Italy remained neutral, albeit it was tied to Germany and the Hapsburg Empire by the Triple Alliance, a defensive military treaty first stipulated on May 20, 1882 and the renovated in 1907 and 1912. On April 26, 1915, the Kingdom of Italy switched its allegiance to the *Entente Cordiale*, signing the Treaty of London. More specifically Italy saw in entering the hostilities to the side of the Entente a precious opportunity to seize the regions of Trentino, Alto-Adige, Friuli Venezia Giulia, Istria and Dalmatia that were under the control of the Hapsburg Empire. These areas were inhabited by people of Italian cultural origin and were perceived as a legitimate part of the Italian nation along the wake of Irredentist sentiments that drove the three Italian Independence Wars during the second half of nineteenth-century. Henceforth on May 23, 1915, the Italian Kingdom declared war to Austria-Hungary. Only three months afterward, the Italian Front, similarly to the Western Front, had consolidated along a S-shaped horizontal line running from the Stelvio Pass, in the northern central section of the then Italian borders to the Adriatic Sea, through the Eastern Alps region the Carso region. See Pirocchi, *Arditi*, 43-45; Martin Gilbert, *The First World War: A Complete History* (New York, NY: Henry Holt and Company, LLC, 2004) 5, 34, 142, 151, 165-166.

Research Limitations

During the conceptual phase of my research, I deliberately chose to limit the scope of my academic investigation in two specific ways. First, I focused my inquiry only on the German and Italian assault units. Nonetheless, it is appropriate to remind that other military organizations developed similar formations with the intent of breaking the *impasse* of trench warfare during the Great War. Secondly, I decided to center my analysis only on the military dimension. The creation of the Italian and German assault units assumed a unique political value in the interwar period. The set of underlying values at the base of each unit's *credo* and esprit de corps ultimately tied in with renowned ideological and political movements, such as the National-Socialism and the Fascism. Hence, I will omit any in-depth consideration over the specific political phenomenon previously described.

In regard to the first point, the Italian and German armies were not the only military organizations that resorted to specialized assault units to cope with the challenges of trench warfare. Salvatore Farina offered a concise and meaningful analysis of other European assault units in his publication, *Le Truppe d'Assalto Italiane (The Italian Assault Troops)*.¹⁹ Farina included in his treatise a synthetic description of the Austro-Hungarian, German and French shock troops, underscoring the ample span of innovation that transversely affected the military institutions of the time. More recently, Paolo Morisi, in his book *Hell in the Trenches: Austro-Hungarian Stormtroopers and Italian Arditi in the Great War*, conducts a comparative analysis of the Italian and

¹⁹ Farina, *The Italian Assault Troops*, 377-405.

Austrian assault troops. His work provides an essential reference to assess the Austro-Hungarian answer to attrition warfare.²⁰ To complete the picture, also the Canadian Corps in Europe established Raiding Parties as specialized units to cope with the challenges of the Western Front.²¹

At various stages of World War I, every belligerent developed some sort of official or unofficial military formation devoted to conducting offensive military raids against the enemy trenches. Nevertheless, I decided to narrow down the scope of this thesis to the Italian Army *Arditi*, the subject of my academic research from the beginning, and the German *Stosstrupps*, considered by different historians as the linchpin of the German doctrinal innovation during the Great War.²² The principles set forth by the publication “*Attack in Position Warfare*,” published by the German Army High Command in January 1918, introduced the embryonic ideas of combined arms warfare²³ and centralized planning and control with decentralized execution.²⁴ To some extent, these notions contributed to the modern concepts of combined arms and mission command nested in the current US and North Atlantic Treaty Organization (NATO)

²⁰ Morisi, *Hell in the Trenches*, chaps. 2, 4.

²¹ Christopher J. Ghiz, “Specialized Assault Units of the World War I Western Front: A Comparative Study of the German Stormtrooper Battalions and Canadian Trench Raiders” (Master’s thesis, U.S. Army Command and General Staff College, Fort Leavenworth, KS, 2010).

²² Lupfer, *The Dynamics of Doctrine*, 27-28, 42-44. See also Bruce I. Gudmundsson, *Stormtroop Tactics: Innovation in the German Army (1914-1918)* (New York, NY: Praeger, 1989) xiv, 49-50.

²³ House, *Toward Combined Arms Warfare*, 34-36, 42.

²⁴ Lupfer, *The Dynamics of Doctrine*, 19, 43.

military doctrine. This kind of innovation represents a milestone in the history of the “Western Way of War.”²⁵ For this specific reason, I selected the German *Sturmtrupps* as the counterpart for my comparative analysis centered on the *Arditi* units. This will allow an introduction of the Italian assault troops during World War I under the light of a historical process already renowned at the level of international military history.

Regarding the second limitation, it is undeniable that the military ethos guiding the *Stosstrupps* and the *Arditi* assumed a specific ideological connotation in the sphere of the right-wing political movements that thrived during the interwar period. As offered by the historian Stephen Bull, the new “tactical ideas” founding this fecund innovation process were borrowed in different cases by the political trends that flourished in Europe in reaction to the rise of extremist leftist fringes in the aftermath of conflict. By and large, despite the restrictions imposed by the Treaty of Versailles, the soldiers that served Germany in the Great War were the primary sustainers and contributors to the growth and consolidation of National Socialism in Germany, in the wake of revanchist and anti-communist sentiments.

The ideological set proper of the Nazi movement is impregnated of references to the *Sturmtrupps*, most notably the denomination of the para-military arm of the National-Socialist organization was “*Sturmabteilung*” (SA, Storm Detachment).²⁶ This term traces back to the first official example of *Stosstrupps*. The *Sturmabteilung* was employed on

²⁵ Parker, “Introduction,” 2-9.

²⁶ Bull, *Stosstrupptaktik*, 163-164.

the Western Front in 1915-1916 under the command of Major Kalsow and later Captain Rohr, commonly considered as the founding father of the German shock troops.²⁷

Similarly, on the Italian side, the ideological retinue attributable to the *Arditi* reverberated heavily in the artistic trend called Futurism and in the Fascist political current, with Filippo Tommaso Marinetti and Gabriele D'Annunzio as their standard-bearers and the numerous veteran associations filling the ranks of these new movements. The Italian soldiers, and especially the *Arditi*, were depicted as “superhuman,” tempered by the harshness of battle, key in rebuilding and regenerating the state after the horrors and the injustice of the Great War. The book “*Noi Arditi*” (*We, Arditi*), written by Mario Carli (a retired *Arditi* captain), in 1919, is a powerful testament to this evolution of a military warrior ethos to an extremist “ideology of blood and violence.”²⁸ Moreover, the Italian historian Giorgio Rochat offers an in-depth analysis of this unique phenomenon in his book *Gli Arditi della Grande Guerra: origini, battaglie e miti* (*The Arditi of the Great War: Origins, Battles and Myths*).²⁹

Aware of the extent of these political and ideological implications, I deliberately chose to conduct my research and to frame my thesis under a purely military perspective. This approach avoids the complexity associated with ideology and politics, pursuing the professional curiosity underlying this academic quest in the first place.

²⁷ Bull, *Stosstrupptaktik*, 79-80.

²⁸ Mario Carli, *Noi Arditi* [*We, Arditi*], ed. Gianluca Nesi (Pisa, Italy: Edizioni ETS, 2019).

²⁹ Rochat, *The Arditi of the Great War*.

Notwithstanding the intention of maintaining a military perspective, a basic appreciation of the influence and implication of political and ideological factors is still necessary. The rich political and ideological heritage proper of the assault units suggests that part of the primary sources consulted during the research could present some sort of distortion in their description of the *Arditi* and the *Stosstrupps*. To reveal and mitigate any possible political and ideological bias, the present research relied on the further analysis of secondary sources, with a methodical confrontation and integration of various points of view.

Terminology

This section of the introduction will define the approach to terminology displayed in this paper. The necessity to clarify this aspect up-front is relevant, considering that the subjects of this research are two foreign military units, respectively, from the Imperial German Army and the Royal Italian Army of World War I.

On the one hand, with specific reference to the sources on the *Sturmtrupps*, this thesis is based on books and documents translated in the English language. On the other hand, the sources related to the Italian *Arditi* were almost exclusively in the Italian language. As already mentioned, outside the scope of Italian military literature, very few written materials exist on this specific topic. This is also part of the idea that triggered this academic quest in the first place. For the sake of clarity, most of the notions and references on the Italian *Arditi* are the result of a translation supported by my language skills. By stating that, I also want to convey the implicit hope that my abilities have been up to this task, taking personal responsibility in full for my work.

By and large, this paper will display specific untranslated words only when conversion in the English language detracts from the specific meaning of the considered word or expression. An example of this guiding principle is the choice to use the term “*Arditi*” and “*Sturmtrupps*,” instead of reporting a simple translation of the words that would be “Audacious Men” and “Storm Troops.” Undoubtedly, a mere transliteration would have impoverished those keywords of the powerful and unique connotation they otherwise retain in their original form. Nonetheless, for the sake of the readers, every foreign word will always be accompanied by the exact definition in the English language. Finally, all the military terms, either doctrinal or technical, will not only be translated but also adequately adjusted to make sense to the modern military reader. In these specific cases, notes will be used to explain the criteria adopted in this process.

CHAPTER 2

A WAR OF ATTRITION: THE CRUCIBLE OF MODERN ASSAULT UNITS

The attack on all points of our front consists in breaking through several lines of defense upon a depth of about three kilometers and in preventing the enemy from holding on further back on new lines already prepared or merely improvised. The attack is therefore an immense, unlimited, simultaneous assault on all points of the front of attack, furiously pushed straight to front until all the enemy's defenses are broken through. ... The whole series of frightful defenses cannot be nibbled at successively; they must be swallowed whole as one stroke with one decision. Therefore, the fight is an unlimited assault. In order to attempt the assault what is necessary? Assaulting troops—and all troops are far from being assaulting troops.

—André Laffargue, *The Attack in Trench Warfare: Impressions and Reflections of a Company Commander*

This study analyzes the development of the German and Italian assault units during World War I. In the specific case of the German Army, this phenomenon was part of the critical process of doctrinal reform that influenced other military institutions involved in the war,³⁰ ultimately setting new standards for the western way of warfare. At the same time, the creation of *Arditi* units in the Royal Italian Army played a crucial role in the final stage of the war, unlocking the stalemate related to trench warfare, and bringing a “degree of movement to what had previously been a war of attrition and frontline stasis.”³¹

³⁰ Morisi, *Hell in the Trenches*, xi, 23, 294-296, Kindle. See also Mark Thompson, *The White War: Life and Death on the Italian Front, 1915-1919* (London, UK: Faber & Faber, 2009), chaps. 19, 26, Kindle. Another mention of this phenomenon can be found in Stephen Bull, *Stosstrupptaktik: German Assault Troops of the First World War, the First Stormtroopers* (Brimscombe Port, UK: Spellmount, an imprint of The History Press, 2014), “Introduction,” “Conclusion,” Kindle.

³¹ Morisi, *Hell in the Trenches*, 305.

The necessity to overcome the problem posed by attrition and trench warfare can be considered the most significant driver to the process of innovation inside military organizations involved in the Great War. This included the creation of modern assault units as one critical feature for the German, Austro-Hungarian, and Italian armies. A wide array of historians supports this view. Among others, Johnathan M. House recognizes the dilemma of penetrating enemy defenses at the base of the development of combined arms doctrine.³² Moreover, Timothy F. Lupfer underscores the relevance of this idea in his analysis of the Imperial German Army's defensive and offensive tactics of World War I.³³ Furthermore, the studies on German assault units conducted by Bruce Gudmundsson and Stephen Bull depict the essential role played by the problem of attrition warfare in inspiring the first examples of assault units.³⁴ Finally, the historians Giorgio Rochat, Angelo F. Pirocchi, Paolo Morisi, Basilio Di Martino, and Filippo Cappellano, unanimously define the *Arditi* as one the most original and effective solutions to the issue of trench warfare conceived in the Royal Italian Army.³⁵

The description of the German *Stosstrupps* and the Italian *Arditi* requires an introduction of the concepts of attrition, position, and trench warfare. How did the European military institutions arrive at the critical *impasse*? What specific conditions

³² House, *Toward Combined Arms Warfare*, 19, 22, 34-35.

³³ Lupfer, *The Dynamics of Doctrine*, 2.

³⁴ Gudmundsson, *Stormtroop Tactics*, 43-44; Bull, *Stosstrupptaktik*, chap. 1.

³⁵ Rochat, *The Arditi of the Great War*, 11; Pirocchi, *The Arditi*, 9; Morisi, *Hell in the Trenches*, v, 299; Di Martino and Cappellano, *The Italian Assault Units in the Great War (1915-1918)*, 1:118; Cristiano M. Dechigi, "Presentation," in Di Martino and Cappellano, *The Italian Assault Units in the Great War (1915-1918)*, 1:5.

influenced the situation of the Western and Italian fronts? This chapter intends to answer these basic, yet essential questions, addressing a necessary premise for the introduction of German and Italian assault units in chapters Three and Four. This work will analyze the problem of attrition by illustrating its definition and identifying its causes in the pre-war period, subsequently depicting the Western and Italian fronts.

First, it is crucial to frame the military problem affecting all the levels of war in the first world conflict, detailing the idea of deadlock in military operations, and outlining the factors that made this issue so difficult to solve. As posited by Morisi, one of the main traits distinguishing World War I from previous conflicts was positional warfare.³⁶ According to historian William R. Griffith, positional warfare can be explained as a “form of warfare in which the mobility of a force is severely restricted in and around positions that are in the immediate proximity of an opposing force.”³⁷ The concept of positional warfare is clearly linked to the notion of trench warfare, which the Merriam-Webster Dictionary defines as “warfare in which the opposing forces attack and counter-attack from a relatively permanent system of trenches protected by barbed-wire entanglements.”³⁸

Another essential point to consider is the concept of attrition warfare, as opposed to maneuver warfare. On the one hand, the first envisages the pursuit of “victory through

³⁶ Morisi, *Hell in the Trenches*, ix.

³⁷ William R. Griffiths, *The Great War: Strategy and Tactics of the First World War* (Garden City Park, NY: One Square Publishers, 2003), 10, quoted in Morisi, *Hell in the Trenches*, ix.

³⁸ Merriam-Webster, “Trench Warfare,” accessed 12 December 2019, <https://www.merriam-webster.com/dictionary/trench%20warfare>.

the cumulative destruction of the enemy's material assets through superior firepower. It is a direct approach to the conduct of war that sees war as a straightforward test of strength and a matter principally of force ratios."³⁹ On the other hand, the second term indicates "warfare by maneuver which stems from a desire to circumvent a problem and attack it from a position of advantage rather than meet it straight on. Rather than pursuing the cumulative destruction of every component in the enemy arsenal, the goal is to attack the enemy 'system'—to incapacitate the enemy *systemically*."⁴⁰

The tactical dilemma faced by military institutions at the beginning of World War I was a problem related to tactics, techniques, and procedures (TTP) for the penetration of the enemy trench-system, followed by successful exploitation of it, first at the tactical level, then at the operational one.⁴¹ This dilemma was also strongly related to the ideas of attrition and position. In this regard, the concept of restricted mobility and maneuver ties in with another critical point: the objective of fighting units engaged in this kind of warfare was not the annihilation of the adversarial force. Instead, the principal goal of positional warfare was the control of specific key terrains in order to acquire a marked advantage on the enemy in terms of maneuver, observation of fires, and positioning of units.⁴² In debating the problem of stasis along the Italian Front, Mark Thompson

³⁹ Headquarters, U.S. Marine Corps (HQMC), Marine Corps Doctrine Publication (MCDP) 1, *Warfighting* (Washington, DC: Government Printing Office, April 2018), 2-15.

⁴⁰ *Ibid.*, 2-16.

⁴¹ House, *Toward Combined Arms Warfare*, 22.

⁴² Gudmundsson, *Stormtroop Tactics*, 28, 39.

identifies the Second Battle of the Isonzo (July 18 to August 3, 1915) as the transition point from a war of position to a war of attrition between the Austrian and the Italian Army. As reported by the same author, this idea is attributable to the Italian Foreign Minister at that time, Sidney Sonnino, who purportedly asserted that “the war was not going to plan, it was turning into something new, a struggle of positions and attrition without decisive manoeuvres.”⁴³

The concept of positional warfare is in line with the notion of attack “with limited objectives” (*Angriff mit Begrenzten Ziel*) of the German tactical doctrine employed at the beginning of the war,⁴⁴ but is also consistent with the definition of “war of manoeuvre on the spot” used by the Austrian Army to describe the situation on the Isonzo front in July 1915.⁴⁵

Overall, it is essential to specify that this study will use all the above-mentioned terms (trench warfare, positional warfare, and attrition warfare) to characterize the problem of tactical stasis that afflicted the main actors during the Great War. From the end of 1914 to the beginning of 1918, most of the military activities conducted on the Western and Italian fronts displayed characteristics related to a trench environment, with a focus both on seizing key terrain and attriting the enemy with the aim of creating a tactical, and then an operational breakthrough.

⁴³ Mark Thompson, *The White War: Life and Death on the Italian Front, 1915-1919* (London, UK: Faber & Faber, 2009), chap. 9, Kindle.

⁴⁴ Gudmundsson, *Stormtroop Tactics*, 39.

⁴⁵ Thompson, *The White War*, chap. 9.

Having framed the tactical dilemma, it is now necessary to identify the factors that made the problem so difficult for the military organizations of the time to solve. As suggested by Gudmundsson, pre-war military TTPs became ineffective after the consolidation of the Western Front.⁴⁶ In the early 20th century, military doctrine revolved around the application of mass and mobility in search of an assailable flank to envelop the opposing formations. The uninterrupted trench lines that ran from the Swiss border to the English Channel precluded any possibility of identifying and exploiting an assailable flank. In addition, the conditions of the battlefield and the consistent application of firepower greatly hampered tactical mobility. The only available option remained the frontal attack.⁴⁷ Unfortunately, this was not enough to obtain decisive breakthroughs. In most cases, the layout of the land allowed each defender to study the adversarial positions in detail with accurate identification of every covered location along the main avenues of approach, including the entry and exit points. The wide array of obstacles that peppered the infamous *no man's land*, the portion of terrain between opposing defensive lines, limited the employment of small parties to create the element of surprise, even during the night. Finally, the possibility of integrating machine guns and artillery in the defensive efforts ruled out any advantage granted by numerical superiority

⁴⁶ Gudmundsson, *Stormtroop Tactics*, 27-28.

⁴⁷ Gudmundsson, *Stormtroop Tactics*, 27-28. The concept of frontal attack as the only viable alternative is also mentioned by the historian Jonathan House: "The French and British were shocked by the vulnerability of their exposed troops and guns to carefully sited German machine guns and artillery. The Germans, in turn, were surprised by the accuracy and rapidity of British and French guns. By the end of 1914, this firepower had resulted in the creation of a continuous line of foxholes and hasty trenches from Switzerland to the North Sea. Thereafter, every attack was of necessity a frontal attack on these trenches." House, *Toward Combined Arms Warfare*, 19.

in the offense. Therefore, as Gudmundsson offers, “all these factors combined to make the dash across ‘no man’s land,’ the few hundred meters that separated one side from the other, a very difficult proposition.”⁴⁸ Historian Stephen Bull also shared the inadequacy of pre-war tactics to the new reality of the battlefield. In his words:

With the digging of the trench lines of the Western Front, the war came to a standstill, but only in the geographic sense. For almost as soon as the first trenches were dug it was apparent that the old tactics of fighting fire with fire were weak, or at worst completely inappropriate. Attacks against solid trench lines, or even against lines of troops in hastily scraped cover stood little chance of success. Statistical probability seemed to have come down ineluctably on the side of the defence.⁴⁹

With a definition of our tactical problem, and the factors precluding a fast resolution by the military institutions of the time, it is now appropriate to identify the causes of the lack of preparedness plaguing the European armies at the outbreak of the hostilities.

The Road to Trench Warfare

During the 19th century, the development of military institutions and the way they conducted warfare followed the principles brought forth by the Napoleonic Wars and the Industrial Revolution.⁵⁰ The first entailed a wave of pervasive ideological and political change centered on the ideas of nation and citizen. It also introduced the concepts of *levée en masse* and national mobilization in support of the war efforts. These innovations allowed the French Revolutionary Army to overcome the limits imposed on military

⁴⁸ Gudmundsson, *Stormtroop Tactics*, 27.

⁴⁹ Bull, *Stosstrupptaktik*, chap. 2.

⁵⁰ Murray and Knox, “Thinking about revolutions in warfare,” 6-13.

institutions by the dynamics of the Old Regime. Harnessing the power of ideology, nationalism, and sheer military genius, Napoleon completely disrupted the European balance of power of the Old Regime.⁵¹ Ultimately, although Napoleon was defeated, the innovative breakthroughs he introduced, directly and indirectly, irreversibly affected military institutions.⁵² First, Napoleon assumed a new strategic approach, based on the annihilation of the opposing armies, to create the necessary conditions for diplomatic and political exploitation.⁵³ This kind of strategy was inconceivable in the Old Regime, where war was a means to achieve limited objectives, often related to the conquest of terrain. Frederick the Great is one of the most famous examples of this specific approach.⁵⁴

Second, at the organizational level, Napoleon structured his army around permanent divisions, as fundamental units for the conduct of warfare. These echelons above the regiment, the basic military unit employed during the 18th century, included infantry, cavalry, artillery, and logistical units, giving the field commander more flexibility in military operations. Third, Napoleon adopted a style of warfare based on

⁵¹ MacGregor Knox, "Mass politics and nationalism as military revolution: The French Revolution and after," in *The Dynamics of Military Revolution, 1300-2050*, ed. MacGregor Knox and Williamson Murray (Cambridge, UK: Cambridge University Press, 2003), 62, 65.

⁵² *Ibid.*, 66-73.

⁵³ Peter Paret, "Napoleon and the Revolution in War," in *Makers of Modern Strategy: from Machiavelli to the Nuclear Age*, ed. Peter Paret (Princeton, NJ: Princeton University Press, 1986), 131.

⁵⁴ Robert R. Palmer, "Frederick the Great, Guibert, Bülow: From Dynastic to National War," in *Makers of Modern Strategy: from Machiavelli to the Nuclear Age*, ed. Peter Paret (Princeton, NJ: Princeton University Press, 1986), 91, 96.

non-linear maneuver. This combined infantry assault columns to penetrate the foremost enemy ranks, cavalry formations to envelop the enemy flanks, or to perform tactical exploitation, with mobile artillery batteries in direct support. Fourth, he understood the importance of the offense as the decisive form of maneuver, based on mass and concentration to achieve the desired effects. Last, Napoleon comprehended the vital role of education in the development of his officers and his staff, even if he maintained a centralized approach to command and control.⁵⁵

The inclusion of the French Revolution and the Napoleonic era in the analysis of the process leading to a certain approach of the European armies to the Great War is not incidental. The strategic, tactical, doctrinal, and organizational principles established by Napoleon ruled the military stage for the remainder of the 19th century and the early part of the 20th century. As offered by the historian Peter Paret, the Napoleonic style of warfare inspired the maneuver concept of the German Army at the beginning and the end of World War I, especially in the Battle of the Marne.⁵⁶

To complete the analysis of Napoleon's fundamental role in the development of the military doctrine of the 19th century, we must consider the changes implemented by the European powers in response to the French military supremacy. All the successful Napoleonic tactics were, in one way or another, quickly absorbed by the military institutions of the time, Prussia *in primis*. It was the Prussian Army, under the reforming

⁵⁵ Paret, "Napoleon and the Revolution in War," 124-142.

⁵⁶ *Ibid.*, 139-140.

efforts of Scharnhorst, that achieved the most, giving priority to “knowledge and education,” thereby creating a military staff in the modern sense.⁵⁷

Going further into the 19th century, Prussia played a critical role in integrating the innovative technological breakthroughs generated by the Industrial Revolution. The introduction of breech-loading rifles and artillery, the railroad, and the telegraph drastically increased the mobility, lethality, and communication capabilities of the armies of the time. In turn, this created the necessity to adapt doctrine and organizations to better harness the advantage granted by this kind of technology and to survive to the increased effectiveness of the adversarial forces.⁵⁸

The American Civil War and the German Wars of Unification highlighted the drastic improvements brought forth by the Industrial Revolution, and the destructive potential of the newly introduced weapon systems. After 1880, a second wave of technological innovation deeply affected military organizations and the way they conducted warfare. Smokeless gun powder, magazine-fed repeating rifles, recoiling and quick-firing artillery, improved artillery fuses, machine guns, and the combustion engine took the European armies a step further toward the tragedy of World War I.⁵⁹

This chapter of military evolution found its expression in the Anglo-Boer War and the Russo-Japanese War. During the first conflict, Great Britain suffered tremendous

⁵⁷ Knox, “Mass politics and nationalism as military revolution,” 71-73.

⁵⁸ Dennis E. Showalter, “The Prusso-German RMA, 1840-1871,” in *The Dynamics of Military Revolution, 1300-2050*, ed. McGregor Knox and Williamson Murray (Cambridge, UK: Cambridge University Press, 2003), 92-104. See also House, *Toward Combined Arms Warfare*, 7-8; Howard, “Men against Fire,” 511.

⁵⁹ House, *Toward Combined Arms Warfare*, 7-8.

losses fighting against Boer formations that employed irregular tactics, together with modern weapons. This combination wreaked havoc on the British forces, used to fighting in close order against conventional opponents. In the end, Great Britain was able to prevail, but at a great cost. The lessons derived from this war underscored the importance of skirmishers and the negative traits of close-order formations.⁶⁰ As offered by the historian Bruce Gudmundsson, the concept of Boer tactics is one of the main doctrinal take-aways for the military institutions of the time, especially the Imperial German Army.⁶¹ The Russo-Japanese War refocused the attention of military theorists and practitioners on large-scale combat operations. At the end of a military renovation process that lasted twenty years, Japan was able to crush Russia, a proven world power. The lessons of this conflict were rather controversial. The advancements in technology and battlefield fortifications had granted a significant advantage to the Russian defender. Nonetheless, the Japanese forces were able to prevail through the consistent application of firepower (mainly indirect-fire artillery) and the adoption of a strong offensive posture. Among other things, the abnormally high count of casualties on both sides suggested that something was changing in the way states waged war.⁶²

The absolute reliance on the strategy of annihilation, firmly rooted in the doctrinal construct of the offense, was the thread that guided the process of military innovation,

⁶⁰ Howard, "Men against Fire," 516-518.

⁶¹ This concept envisaged the use of small teams of skirmishers tasked with gradually attriting the enemy using every form of cover and concealment offered by the terrain. Gudmundsson, *Stormtroop Tactics*, 20-21.

⁶² Howard, "Men against Fire," 516-518. See also House, *Toward Combined Arms Warfare*, 17.

which unfolded in the 19th century. The above-mentioned conflicts proved the necessity of avoiding frontal attacks and favoring envelopment of the enemy formations, building on mass, firepower, and concentration. The faith in this form of maneuver was so strong that it influenced the conduct of warfare up to the strategic level. In this regard, the Schlieffen plan was one of the most prominent examples.⁶³ Most of all, the military institutions at the beginning of World War I were operated by what Howard defines as “the spirit of the offensive.”⁶⁴ Understanding this point is critical for putting into the right perspective the exploits of the European armies in this time frame. Throughout the 19th century, aggressive and offensive tactics had proved the key to success in war, even in the most controversial cases, such as the Anglo-Boer War. This approach generated a marked imbalance toward the offense in the continuum of military operations, at a dear price paid in human lives.

At the beginning of the 20th century, the culture of offense permeated the minds of the officers, exalting the predominant role of the soldier and mass concentration in warfare. In this respect, the assault “*à l’arme blanche*”⁶⁵ was viewed as the most sublime manifestation of this offensive spirit, allowing man to prevail over any advantage granted

⁶³ Howard, “Men against Fire,,” 520-522.

⁶⁴ *Ibid.*, 520.

⁶⁵ As defined by the Merriam-Webster dictionary, *arme blanche* is a French term characterizing “a cutting or thrusting weapon (such as a sword or lance) as distinguished from a firearm.” See Merriam-Webster, “*arme blanche*,” accessed 11 April 2020, <https://www.merriam-webster.com/dictionary/arme%20blanche>.

by technology.⁶⁶ Later on, this kind of mentality constituted a perfect match with the theory of *élan vitale* of the vitalist philosopher, Henry Bergson. According to this specific philosophic trend:

[A]ction supplants virtue or utility as the measure of value. Action is not a substitute for knowledge but a higher mode of knowledge, soaring above the pedantry of investigation and research. From this angle, concepts are the enemy of understanding, because they separate us from the flow of sensations and intuitions that make up life's substance.⁶⁷

The review conducted so far should be sufficient to depict how most European armies approached World War I. Collectively, there was a strong faith in the decisive nature of offensive operations, boosted by mobility and firepower, and conducted under the logic of the envelopment, from the tactical to the strategic level. Most of all, the belligerents firmly believed that “the war would be short, and it would be won by the side which attacked more determinedly and persistently.”⁶⁸

Indeed, the nature of the operations conducted on both fronts in the first months of the war is a clear manifestation of this approach. Yet, with specific reference to the Western Front, in September 1914, Helmuth von Moltke's version of the Schlieffen Plan failed to defeat the French forces, with the subsequent withdrawal and consolidation of the German field armies along the Aisne River. Plan XVII, issued by the French Army Staff in February 1914, fared even worse. As a matter of fact, the French First and Second armies were not even able to break into the Alsace-Lorraine and the Ardennes.

⁶⁶ John Ellis, *Eye-Deep in Hell: Trench Warfare in World War I* (New York, NY: Pantheon Books, 1976), 82. See also Bull, *Stosstrupptaktik*, chap. 1.

⁶⁷ Thompson, *The White War*, chap. 20.

⁶⁸ Bull, *Stosstrupptaktik*, chap. 1.

By November 1914, after the so-called “race to the sea,” the war had lost any sort of mobility, turning into a stalemate. The result was a 500-mile front that ran from Switzerland to the English Channel.⁶⁹ As better explained later, at the end of this process, the belligerents massed troops along the new front line to quickly overwhelm the opponent. The number of units deployed was such that the sheer density of forces and the firepower they could field became decisive factors in stifling maneuver.⁷⁰

These events marked the beginning of attrition warfare in World War I. During the following three years, characterized by a succession of bloody and inconclusive battles, the initial lines of the Western Front would be subjected only to minimal changes. As other states, such as Turkey and Italy, entered the hostilities, new fronts, characterized by the immobility of trench warfare, would open. Among these, the Italian Front assumes a significant role in the present study. Starting from May 1915, the Royal Italian Army fought the Austrian Army until the end of the Great War in November 1918. Despite the conduct of ferocious battles with a disproportionate amount of losses on both sides, the battle lines consolidated in July 1915, from Switzerland to the Adriatic Sea, would show only minor adjustments.

At this point, we need to address a last, fundamental question: why the European armies arrived at the outbreak of the hostilities so ill-prepared to face positional warfare? Unfortunately, there is no simple answer to this question. By and large, the inability of military institutions to cope with trench warfare sprouted from the combination of

⁶⁹ Murray, “The West at War, 1914-1918,” 267-270.

⁷⁰ House, *Toward Combined Arms Warfare*, 7-8.

multiple factors along the entire spectrum of Doctrine, Organization, Training, Materiel, Leadership and Education, Personnel, and Facilities (DOTMLPF). Therefore, I will take advantage of the DOTMLPF framework, a tool frequently used to assess a military organization, to illustrate the outcome of my analysis of this specific matter.

Regarding the doctrinal domain, as offered by Jonathan M. House, at the beginning of the 20th century, all the modern armies, with few exceptions, shared the same doctrinal constructs. At the strategic level, the key to success laid in short and decisive conflicts, based on the annihilation of enemy forces. In this context, seizing, retaining, and exploiting the initiative in attacking the adversarial force was of the essence. At the tactical level, the offense was considered the preferred type of military action.

The typical template of a battle envisaged each army moving to contact in an open formation toward the supposed enemy positions, with a screen of cavalry units, or a guard of infantry. Once contact with the opposing forces was established and a weak point in the enemy formations identified, infantry would push forward along different skirmish lines, preferably against an assailable flank. This technique implied the leapfrogging of different groups of infantrymen, with the idea of exploiting any covered location offered by the environment. Its purpose was to mitigate the lethality of enemy firepower. Follow-on formations in the rear were bound to replace the casualties that inevitably occurred. Machine guns⁷¹ and artillery would generally be placed behind the infantry ranks, in an

⁷¹ House, *Toward Combined Arms Warfare*, 13-14. As posited by the author, the first prototypes of machine guns were too heavy and cumbersome to accompany the advance of the infantry formations.

offset position, to guarantee direct support. Their task was fixing the opposite front lines, forcing the enemy to a hasty defense, and disrupting any inbound reinforcements. The ultimate goal for the attackers was closing the distance with the adversarial units, “establish fire superiority,” and finishing the work through an assault with the bayonet. In this respect, surprise, offense, mass, and concentration were essential to prevail over the enemy.⁷² Cavalry units were mainly oriented to conduct security, screening, and pursuit. The increased lethality of the weapons on the battlefield discouraged the use of mounted formations for direct offensive action. Engineer units, albeit present in small numbers in most of the armies of the time, were usually dedicated to mobility and counter-mobility tasks, together with technical assignments, such as the maintenance of certain weapon systems. Overall, it is critical to underscore that the concept of combined arms maneuver had not yet taken root in modern military doctrine.⁷³

When the Great War broke out, this widely-shared doctrinal approach led to a series of negative consequences. First, it was usually challenging to achieve local fire and numerical superiority against an opposing force, given the strong similarities in size and numbers of the military formations on both sides. During the 19th century, the observation and study of successful armies was common practice, and this generated a “doctrinal cross-pollination” among the military institutions of the leading world powers. In this respect, the Imperial German Army was one of the most followed models.⁷⁴

⁷² House, *Toward Combined Arms Warfare*, 13-14.

⁷³ *Ibid.*, 12-13.

⁷⁴ *Ibid.*, 13-14.

Second, the infantry formations of most armies were unprepared to assault and conquer heavily fortified positions, and to conduct defensive operations for prolonged periods. As previously offered, the focus was on offensive maneuvers, preferably an envelopment, with the conduct of movement to contact when the enemy positions were unknown.⁷⁵

Third, there was not a clear and consolidated doctrine related to the employment of fire support. The artillery was chiefly tasked with providing support to the advancing infantry formations using direct fire. As a matter of fact, indirect-fire techniques were considered too complex and unsuitable for a battlefield role.⁷⁶

Fourth, battlefield density in terms of troops, especially on the Western Front after November 1914, precluded any possibility of outflanking an enemy formation. In this case, a frontal assault remained the only viable alternative. This was a direct consequence of an over-reliance on the principles of concentration and mass. As maintained by the historian Stephen Bull: “A major paradox of the attack was that denser formations generated more firepower, but at the same time presented an easier target to hit. Moreover, if the men spread out, it became more difficult for officers to control them.”⁷⁷

This reference to command and control leads us to the last relevant point regarding the doctrinal domain. On the one hand, the officers of the time had problems in controlling large formations on the battlefield. The technology of radio communications

⁷⁵ House, *Toward Combined Arms Warfare*, 14.

⁷⁶ *Ibid.*, 16-17.

⁷⁷ Stephen Bull, *Trench Warfare* (New York, NY: Sterling Publishing Co., 2003), 45.

was not yet mature, whereas the telegraph and the field phone were of little use to dynamically direct military units in combat. On the other hand, in most military institutions, the officer class, composed mainly of professionals, did not believe their subordinates capable of accomplishing the assigned tactical tasks on their own initiative.⁷⁸ Perhaps the only exception was the German Army, where the junior officers and non-commissioned officers (NCO) enjoyed a higher degree of trust and independence than in other armies.⁷⁹ The inevitable result of this lack of trust implied that success in battle was sought through “high morale and firm control,”⁸⁰ thus limiting the degree of initiative and flexibility at the tactical level.

In the organizational domain, as for doctrine, all the European armies shared uncanny similarities at the beginning of the war. The basic combat formation was the infantry division, composed of twelve infantry battalions, structured in four regiments and two brigades.⁸¹ Each infantry battalion had a variable number of machine guns attached. This pattern followed the standards set by the German Army, held in high regard throughout Europe.⁸² Every division usually had an organic light artillery brigade,

⁷⁸ House, *Toward Combined Arms Warfare*, 15. See also Martin Samuels, *Command or Control? Command, Training and Tactics in the British and German Armies, 1888-1918* (London, UK: Frank Cass and Co. Ltd., 1995), 77.

⁷⁹ Lupfer, *The Dynamics of Doctrine*, 19.

⁸⁰ House, *Toward Combined Arms Warfare*, 15.

⁸¹ House, *Toward Combined Arms Warfare*, 9-11. The only exception was the Russian Army, whose divisions contained 16 battalions, structures in two brigades with two regiments each.

⁸² *Ibid.*

with a small component of cavalry and engineers. In addition, the armies of the time featured cavalry divisions or brigades, generally provided with horse artillery batteries, to conduct screening, security, and pursuit.⁸³

At the beginning of the 20th century, armies relied heavily on reservists and conscripts. This fact derived from the necessity to field large armies to reach the size demanded by a doctrine that prized the employment of mass formations. The reserve and conscript units often lacked training, and they were not considered proficient enough to employ fire and movement tactics on the battlefield. For this reason, in 1914, close-order formations were usually favored despite the famous Boer tactics. This specific point ties in with the doctrinal and training domains. On the European stage, there were mainly two exceptions to this rule. The first was the British Expeditionary Force, composed almost exclusively of well-trained, long-service volunteers. The second was the Imperial German Army, based on a combination of active duty divisions, reinforced by a minimum number of reservists, and reserve divisions with active duty cadres (Army Reserve and *Landwehr*).⁸⁴

⁸³ House, *Toward Combined Arms Warfare*, 10-12.

⁸⁴ House, *Toward Combined Arms Warfare*, 15. See also Samuels, *Command or Control?*, 77, 81-82. Before the opening of World War I, the German military system was based on a four-layer service for enlisted. At the age of twenty, a certain number of men were conscripted to serve in active duty units for a period of two years. Then, they shifted to the Army Reserve to serve for other five years. At the end of that stint, they moved to the *Landwehr* and subsequently ended their military careers in the *Landsturm*. These last two units were generally territorial formations employed for garrison duty, even if the German Army made consistent use of *Landwehr* units in the Great War. Martin Samuels, *Doctrine and Dogma: German and British Infantry Tactics in the First World War* (Westport, CT: Greenwood Press, 1992), 98.

Considering the training domain, there are two main observations to make. First, the military units of the time trained following doctrinal precepts heavily focused on offensive operations. As a result, personnel did not receive a preparation adequate to excel in the assault of entrenched positions, nor was it ready to manage defense operations for a prolonged period.⁸⁵ In addition, in the absence of a combined arms concept, the military formations of different branches were not used to operating with high levels of integration, synchronization, and coordination.⁸⁶ Second, most armies employed large masses of conscripts and reservists. For this reason, there was little time to conduct thorough and effective training programs, aimed at attaining high levels of tactical proficiency. This affected the level of trust of active-duty commanders, lessening the confidence in their subordinates to operate with a high degree of initiative and autonomy, as already mentioned in the previous paragraph.⁸⁷

In respect to the materiel domain, during the 19th century, military institutions adopted a wide variety of new technologies that at the onset of the Great War were not yet fully understood,⁸⁸ experimented, or even mastered. This is particularly true for the advancements brought forth by the second wave of industrial innovation that pervaded

⁸⁵ House, *Toward Combined Arms Warfare*, 14, 16.

⁸⁶ *Ibid.*, 17-18.

⁸⁷ *Ibid.*, 15-16.

⁸⁸ Ellis, *Eye-Deep in Hell*, 80. See also House, *Toward Combined Arms Warfare*, 8, 17.

Europe after 1880. Additionally, this technological change affected most of the European powers, whose armed formations generally expressed a similar array of capabilities.⁸⁹

Although military theorists and practitioners drew some significant lessons out of the 19th century's most famous conflicts, the military organizations had not been able to adapt to the new reality of warfare.⁹⁰ It is also significant that the new industrial advancements favored a defensive approach over an offensive one. First, the increased lethality of weapon systems provided a decisive advantage to military forces in defense, especially from fortified positions.⁹¹ Second, the development of the railway enhanced the processes of mobilization, deployment, and even the movement of troops between different sectors of the same front.⁹²

However, rail mobility depended heavily on the efficiency of railroad systems. In this respect, at the beginning of the Great War, the German Army lost the advantage of the railway when it pushed through Belgium. The Belgians destroyed most of the rail system before the invaders could control it. On the other side, French troops, and later the British, were able to use the part of the French railway system that remained unscathed after the first months of the war, to the advantage of moving personnel and supplies along

⁸⁹ House, *Toward Combined Arms Warfare*, 7-12, 17.

⁹⁰ House, *Toward Combined Arms Warfare*, 8, 17.

⁹¹ *Ibid.*, 8.

⁹² House, *Toward Combined Arms Warfare*, 8. See also Showalter, "The Prusso-German RMA, 1840-1871," 100-101.

interior lines of communications.⁹³ Again, the railway favored the defense. The historian Stephen Bull clearly describes this phenomenon in his book *Trench Warfare*:

Railway now allowed troops to move faster than ever before—and even transfer from front to front with a fair turn of speed—yet this rapidity was not one which transferred to the battlefield itself. Soldiers arrived at the nearest railhead which had not been destroyed and were promptly reduced to walking speed. Actual battles and potential breakthroughs were still conducted at a Napoleonic tempo, while troops moving longer distances to intercept these offensives could move much faster. The result was that strategy tended to disappear too easily into a form of tactical treacle. Sweeping moves up to a frontier were very possible if properly planned and timed—moves beyond degenerated into a foot slog every bit as exhausting as those of previous centuries.⁹⁴

Third, the introduction of new technologies added the air dimension to the military world. Combined with an improvement to field communications assured by the telegraph and the field phone, airpower enormously facilitated the possibility of detecting military units, so minimizing the possibility for surprise. Without a doubt, the battlespace was changing, making maneuver far more difficult.⁹⁵

The concept of leadership in the European armies at the beginning of the 20th century revolved around 19th-century ideas and preconceptions. At that time, there were two main schools of thought. The first, exclusively present in the German military tradition, was called “directive control” and was based on decentralized decision-making, underpinned by “flexibility, independence and initiative.” This style of command was the best way to cope with the very essence of combat, which was considered “inherently

⁹³ Murray, “The West at War, 1914-1918,” 268-269.

⁹⁴ Bull, *Trench Warfare*, 45.

⁹⁵ Bull, *Stosstrupptaktik*, chap. 1.

chaotic.”⁹⁶ The second was mainly informed by the concept of “restrictive control.” This approach traditionally belonged to the British military establishment, but it was also widely common among other armies. This envisaged the assignment of detailed orders to the military commanders, who had to carry out their tasks exactly as prescribed, with little space for initiative. In turn, this philosophy was derived from a conception of combat as a “structured” reality.⁹⁷

Overall, notwithstanding the various approaches to command and leadership, military leaders at various levels, and the military system itself, were not ready to face the different nature of modern combat. First, the military establishment saw leadership and command only as the purview of the officer class, following a rigid hierarchical structure that stifled the dialogue between different tiers of the organization.⁹⁸ Second, as maintained by the historian Martin Samuels, the “cult of the *arme blanche*,” traditionally part of the cavalry tradition, became predominant also among the infantry officers.⁹⁹

This idea implied the biases that firearms were not decisive and that the key to success in battle laid in the assault, which in turn depended on the superiority of moral factors over technical ones.¹⁰⁰ As previously mentioned, this mentality found its complement in the philosophic principles of vitalism, an idea that spread throughout

⁹⁶ Samuels, *Command or Control?*, 2-6.

⁹⁷ Samuels, *Command or Control?*, 2-6.

⁹⁸ Samuels, *Command or Control?*, 77. See also Ellis, *Eye-Deep in Hell*, 80.

⁹⁹ Samuels, *Command or Control?*, 63.

¹⁰⁰ Samuels, *Command or Control?*, 62. See also Ellis, *Eye-Deep in Hell*, 82; Howard, “Men against Fire,” 515.

Europe at the beginning of the 20th century. This exalted the idea of “action” and “*élan vitale*,” despite “virtue and utility.”¹⁰¹ In his book, *The White War: Life and Death on the Italian Front, 1915-1919*, historian Mark Thompson gives a vivid description of this issue:

The shrillness of military vitalist thinking around 1910 showed the urgency of the problem confronting the general staffs. Arguing that soldiers' morale was detachable from the quality of training, equipment and command, or the mere probability of survival, was a strange endeavor for the military mind. In this case, it was a resort adopted under great pressure. How else to reconcile the drastic improvements in defensive power since the American Civil War with the tactical necessity of infantry attacks? ... Frontal attack was the military expression of vitalist beliefs about nation and society.¹⁰²

This kind of mentality brought forth an almost fatalistic acceptance of losses among the ranks in the pursuit of a frontal attack. Moreover, this approach was affected by the idea of *élan* and the superiority of a moral dimension of courage and glory.¹⁰³ Third, leadership and command were focused on the officers and informed by a strong centralization. Combined with the doctrinal reliance on mass, a mystical faith in the superiority of man over technology, and limited means to exercise command and control in battle, this mindset pointed once again at the practice of frontal assault against fortified positions. For the above-mentioned reasons, the leadership dimension contributed to the inability of the modern armies of Europe to overcome the dilemma of positional warfare.

In summation, the DOTMLPF analysis underscores a general level of unpreparedness for the challenges of trench warfare, together with a lack of flexibility

¹⁰¹ Thompson, *The White War*, chap. 20.

¹⁰² Thompson, *The White War*, chap. 20.

¹⁰³ Howard, “Men against Fire,” 526.

and adaptability in military organizations at the beginning of World War I. Doctrinal, organizational, training, and leadership factors inevitably sealed the deadlock affecting the battlefield during the Great War, despite the changes introduced by the technological innovations of the late 19th century. With a better understanding of these conditions, we can now take a closer look at the problem itself under the perspective of the Imperial German Army and the Royal Italian Army.

Analysis of the Western and the Italian Fronts

A proper explanation of the conditions requiring the creation of Italian and German assault units is essential to comprehend the birth and evolution of those outfits. Since the two military organizations fought in different theaters during World War I, we must take a step further in describing, comparing, and contrasting the respective areas of operations. For the sake of completeness, we must underscore that the German Army did not fight exclusively on the Western Front, whereas the Italian Army did not limit its operations to the Italian-Austrian border. As a matter of fact, among other theaters, German troops decisively contributed to the success of the Austrian Offensive at Caporetto in 1917.¹⁰⁴ Similarly, Italian formations, and *Arditi* units, supported the *Entente* operations on the Western Front.¹⁰⁵ Notwithstanding, the challenges of trench warfare typical of Western and Italian fronts, dictated the conditions for the birth of the

¹⁰⁴ Erwin Rommel, *Infantry Attacks*, trans. Gustave E. Kiddle (Washington, DC: The Infantry Journal, 1944), chaps. 10, 11, 12, 13. See also Gudmundsson, *Stormtroop Tactics*, chap. 8.

¹⁰⁵ Farina, *The Italian Assault Troops*, 329-331. See also Di Martino and Cappellano, *The Italian Assault Units in the Great War (1915-1918)*, 2:25-43.

German and Italian assault units. Therefore, this study is going to focus on these two theaters.

The Western Front originated after Germany's failed attempt to defeat France with the conduct of a strategic envelopment from the north, pushing through Belgium inside French sovereign territory. After the battle of the Marne, in September 1914, General Helmuth von Moltke ordered a withdrawal of the five field armies composing the right wing and the center of the German formation and a consolidation along the Aisne River, despite a perceived impossibility of carrying on with the maneuver envisaged by the Schlieffen plan. For the next two months, the opposing forces would try to outflank one another pushing north, to regain freedom of maneuver on the adversarial force. Known as the "race to the sea," this phenomenon caused the extension of the temporary front consolidated along the Aisne River, up to the English Channel.

By November 1914, German formations had locked the French Army, supported by the British Expeditionary Force, along a continuous 475-mile line that spanned from the Belgian coast to Switzerland.¹⁰⁶ From the north, the front started at Nieuport. It then pushed south through Belgium and France, turning east near Soissons. Finally, from the small town of Pont à Poisson, the front line then ran parallel to the border with Germany inside French territory. The British sector extended from Nieuport to the Somme, while the French Army covered the remainder of the line.¹⁰⁷

¹⁰⁶ Murray, "The West at War, 1914-1918," 267-270.

¹⁰⁷ Ellis, *Eye-Deep in Hell*, 10.

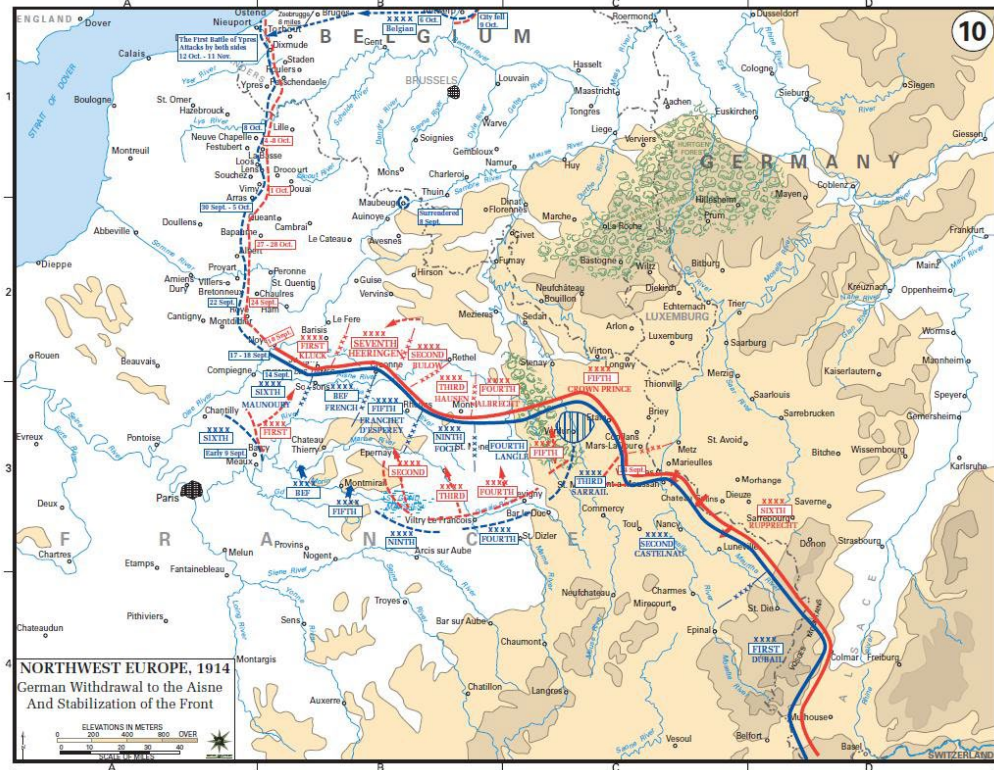


Figure 1. Northwest Europe, 1914: German Withdrawal to the Aisne and Stabilization of the Front

Source: United States Military Academy West Point, “Northwest Europe, 1914: German Withdrawal to the Aisne and Stabilization of the Front,” accessed January 1, 2020, https://www.westpoint.edu/sites/default/files/inline-images/academics/academic_departments/history/WWI/WWOne10.pdf.

Two main topographic factors characterized the northern part of the Western Front, from the Belgian coast to the region of Lorraine. First, the terrain was generally flat, with rolling hills to the east of Soissons, where the front line bent toward the German border. The morphology of the terrain became more articulated approaching the region of Alsace, then Switzerland. Second, the northern part of the front maintained a relatively low elevation, which gradually increased moving toward Lorraine and Alsace. In the Flanders, in Belgium, the average elevation was seldom more than a few meters above

the sea level, whereas in Verdun, west of Lorraine, it reached two hundred meters above sea level. With this type of environment, the smallest hill or height assumed a strategic relevance.¹⁰⁸ An example of that is the famous “Hill 60,” southwest of Ypres. With an elevation of only 60 meters above sea level, this particular location was heavily contested throughout the war.¹⁰⁹ Moreover, water and mud became a source of attrition, as well as the enemy itself. In his book *First World War: A Complete History*, Martin Gilbert provides a vivid account of this phenomenon:

Visiting the front line that winter [1914], General Pétain reported that deep mud was delaying the French advance. In the British sector, 20,000 men were invalided during the winter on account of the ‘trench feet’ alone. The British Commander-in-Chief, Sir John French, found the ground ‘only a quagmire’ when he visited it on December 10. ‘In that part of the world,’ General Smith-Dorrien later recalled, ‘there appeared to be no stones or gravel, and rain converted the soil into a sort of liquid mud of the consistency of thick porridge without the valuable sustaining quality of that excellent Scots mixture. To walk off the roads meant sinking in at once.’ As the protective parapets [of the trenches] were built ‘they gradually subsided and the trenches filled with water, so to retain any cover at all meant constant work.’¹¹⁰

This issue was momentous in the region of the Flanders, especially near the sea, where the terrain featured numerous channels and ditches, controlled by a complex system of dams. The Germans were able to use this factor to their advantage, deliberately destroying the sluices to flood the battlefield to create miserable living conditions for the British adversary. In addition, the specific type of soil precluded the excavation of deep

¹⁰⁸ Ellis, *Eye-Deep in Hell*, 10-11.

¹⁰⁹ Matt Leonard, “Hill 60,” *Military Times* (June 2011): 64-65, accessed December, 19, 2019, <https://conflictarchaeology1.files.wordpress.com/2011/12/hill-60.pdf>.

¹¹⁰ Gilbert, *The First World War*, 114.

trenches, because the water level was just under the surface. This led armies to seek to protect personnel through the construction of pillboxes made with sandbags, digging as little as possible to establish a suitable basement. This precise type of fortifications was called “command trenches” or “parapet” by the British, whereas the Germans called those “box trenches.” In this respect, on the Western Front, the environment played a crucial role, heavily affecting combat operations, the troops’ daily routine, and the construction and maintenance of fortifications and trenches.¹¹¹

Another significant factor to consider is what historian Stephen Bull describes as a “strategic logjam.” As the war progressed after the consolidation of the front line, the belligerents accelerated the flow of reserves aimed at overwhelming the adversarial force as quickly as possible. As offered by Bull: “On the Western Front, each side could comfortably put a million men into the field straight away—or to express this in another manner, about 2,500 men for each mile of the line.”¹¹² This fact contributed to the establishment of a congested “target-rich environment,” hindering the possibility of maneuvering and dispersing the troops on each side that remained more vulnerable to enemy fires.¹¹³ Summing up, after November 1914, the military operations conducted on the Western Front felt the effects of the environment and the congestion of opposing formations deployed along a line approximately 500 miles long.

¹¹¹ Ellis, *Eye-Deep in Hell*, 10. See also Jünger, *Storm of Steel*, 159.

¹¹² Bull, *Stosstrupptaktik*, chap. 1.

¹¹³ *Ibid.*

Shifting our attention to the Italian Front, we first have to consider that Italy declared war on the Hapsburg Empire in May 1915. The Kingdom of Italy, a constituent member of the Triple Alliance since 1882, remained neutral when war broke loose in August 1914, “with an eye to future participation if advantage could be gained.”¹¹⁴ Since the establishment of the Italian Kingdom in 1861, Italian strategic interests had focused on the acquisition of a series of regions along the border with Austria. More specifically, those areas included Trentino and Alto Adige (also known as South Tyrol), the Dolomites, Carniola (roughly corresponding to the actual State of Slovenia), the cities of Trieste and Gorizia, Istria and Dalmatia. Without a doubt, irredentist sentiments played a role in the definition of those interests, emphasizing the reunification of all the people of Italian culture under one flag.

However, the real objective of the Italian Government was to consolidate a strong border with Austria and expand its influence to the Balkan region and the Adriatic Sea.¹¹⁵ After the beginning of World War I, each faction tried to ensure the support of further allies, to create additional strategic dilemmas for a respective opponent. In this regard, Italy shared borders with France and Austria. Hence it was constantly courted by both states for support. The Italian Government, following the lead of the Minister of Foreign Affairs, Sidney Sonnino, exploited this fact to make separate negotiations with the Central Powers and the *Entente* to obtain South Tyrol, Istria, Dalmatia, the

¹¹⁴ Gilbert, *The First World War*, 34.

¹¹⁵ Thompson, *The White War*, chap. 1.

Dodecanese Islands and the cities of Gorizia, Trieste, and Valona (Albania) in exchange for intervention in the war.

By March 1915, the *Entente* powers had finally given in to the Italian requests, while Austria was still showing an unwillingness to accommodate Italian aspirations to a full extent. This situation helped the Italian Prime Minister, Antonio Salandra, and Sonnino to tip the scale of political debate in Italy in favor of an intervention against the Central Powers. The Treaty of London, secretly signed on April 26, 1915, sealed the terms of the Italian involvement in the Great War. On May 23, 1915, Italy declared war on the Austro-Hungarian Empire.¹¹⁶

¹¹⁶ Thompson, *The White War*, chap. 2.

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Figure 2. Austro-Italian Border Area, 1914

Source: World War 1 Live, “Austro-Italian Border Area, 1914,” accessed January 2, 2020, <https://ww1live.wordpress.com/2015/03/27/italy/>.

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Figure 3. The Ethnic Groups of Austria-Hungary in 1910 According to Distribution of Races in Austria-Hungary by William R. Shepherd, 1911

Source: Andrein, “Ethno-linguistic map of Austria-Hungary,” in “40 maps that explain World War I,” by Zach Beauchamp, Timothy B. Lee, and Matthew Yglesias, Vox Media, August 4, 2014, accessed January 2, 2020, <https://www.vox.com/a/world-war-i-maps>.

The Italian strategic concept envisaged a decisive operation to penetrate Austrian defenses on the eastern border. More precisely, the Second and Third armies had the task of attacking along two axes directed to the cities of Gorizia and Caporetto. In addition, the Italian plan included three shaping operations. The first, assigned to the so-called “Carnia” Corps, aimed at breaching the Austrian lines in the north-eastern region of Carnia, with an axis of advance on the city of Tarvis. The second operation was the

responsibility of the Fourth Army and called for an offensive thrust into Austrian lands through the Dolomites. The third operation, entrusted to the First Army, provided for the containment of any enemy activity out of the Adige Valley into Italian sovereign territory.¹¹⁷

After May 24, 1915, the Italian advance toward the identified objectives was generally slow. This was due in part to issues related to the mobilization that started on May 22 and took more time than anticipated. Moreover, the Austrian Army used the native populations of certain areas, such as the Dolomites, to spread misinformation in the Italian ranks about the actual level of the defenses in place. In reality, the Austrian Army units in the Alps, mostly part of a territorial reserve, had withdrawn behind the border, consolidating their lines on more defensible positions. Along the Isonzo River, only two Austrian divisions were available to conduct the defense. We have to remember that Austria was also heavily engaged on the Eastern Front, facing the Russian Army. Therefore, the border with Italy was lightly defended. The skillfully conducted information operations, together with the Italian mobilization problems, bought time for further Hapsburg units to arrive.¹¹⁸

By July 1915, after the end of the Second Battle of the Isonzo, the Italian Front covered 370 miles, in an S-shaped line running from Switzerland to the Adriatic Sea, with an east-west orientation.

¹¹⁷ Thompson, *The White War*, chap. 5.

¹¹⁸ *Ibid.*

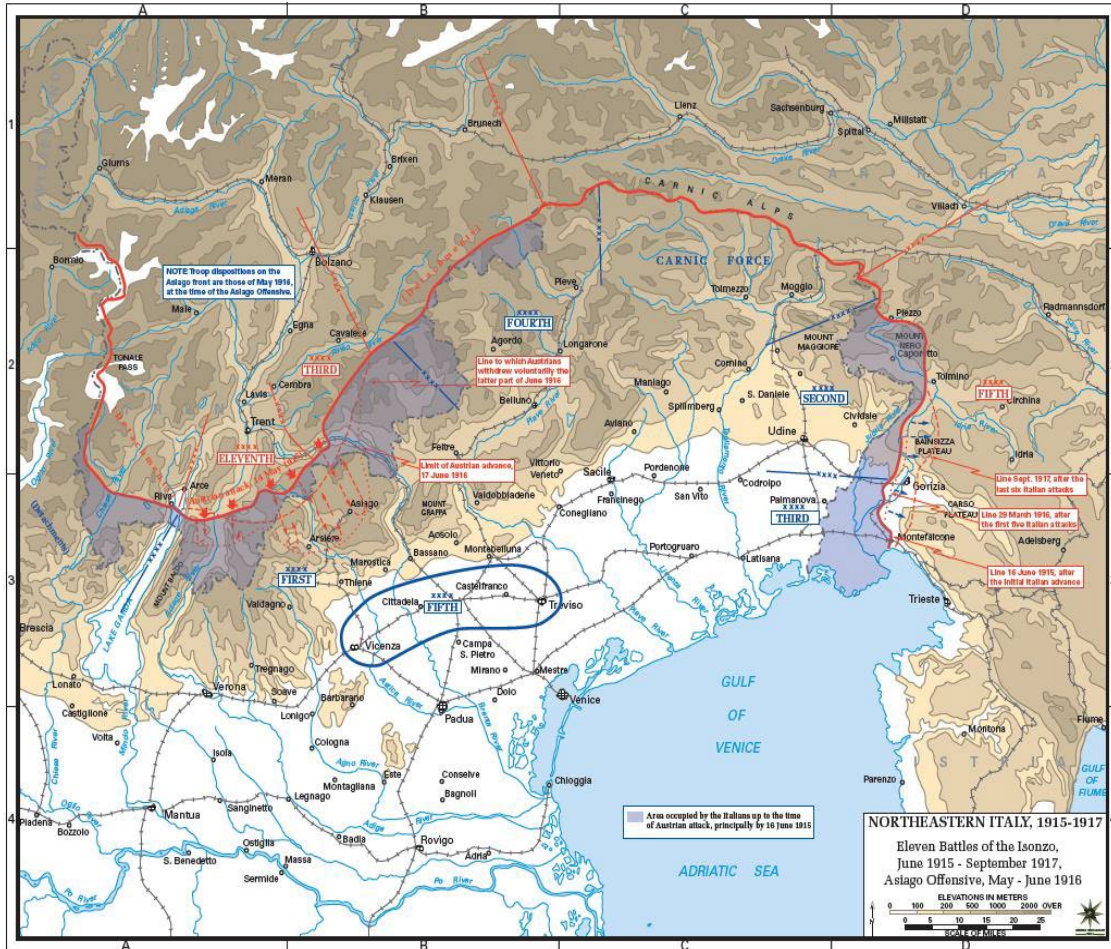


Figure 4. Northwestern Italy, 1915-1917: Eleven Battles of the Isonzo, June 1915-September 1917

Source: United States Military Academy West Point, “Northwestern Italy, 1915-1917: Eleven Battles of the Isonzo, June 1915-September 1917,” accessed January 2, 2020, https://www.westpoint.edu/sites/default/files/inline-images/academics/academic_departments/history/WWI/WWOne14.pdf.

More precisely, it extended from the Stelvio Pass, along the mountain ranges of Trentino (the Ortles, the Presanella and the Adamello) to the northern shores of Lake Garda. The line then crossed the Adige valley, just north of the city of Verona, cutting east to the Asiago Plateau and bending north, following the Dolomites strategic passes. Farther to the east, the front passed through the region of Carnia of the Julian Alps,

finally ending along the line materialized by the Isonzo River, going south to the Adriatic Sea. The sector between Stelvio Pass and Garda Lake was characterized by harsh, rugged mountainous terrain, with high peaks and glaciers. Here the terrain critically limited mobility and maneuver in military operations. Furthermore, the military units controlling the main lines of communications, mountain passes, and high ground enjoyed a disproportionate advantage over the opposing forces.

The portion of the front between Garda Lake and the Asiago Plateau presented less significant altitudes. Nonetheless, the terrain morphology remained a severely restrictive factor regarding military operations, with the additional problem of dense vegetation. For this *tranche* of the line, we can assume the same considerations reported for the previous sector. In addition, the control of the mountainous area between the southern edge of the Adige Valley and the Asiago Plateau (called Prealpi) assumed a strategic relevance because it assured dominance on the northern edge of the Padana Plain. Considering the Dolomites and the Julian Alps sector, the rugged and difficult terrain had a significant impact on military operations.

Throughout the alpine area of the front included between the Stelvio Pass and the Julian Alps, the Italian Army had to face the obstacle represented by a wide array of fortifications established by the Austrian Army between 1907 and 1914 under the guidance of General Franz Conrad von Hötzendorf. This excellent defensive barrier exploited several fortresses to block any infantry advance from the Veneto region. More precisely, it was underpinned by a chain of existing forts (Tonale, Presanella, Pejo, Carriola, Garda, Tombio and Ponale), together with a new fort controlling access to Folgaria and Lavarone, an extensive network of trenches surrounding Trento, and a new

deep trench line protecting the Tyrol region, called “Tyrol resistance line” (*Tiroler Widerstandslinie*). The Isonzo sector was the only part of the front characterized by relatively flat terrain. However, the east bank of the river was overlooked by an almost continuous line of mountains, hills, and plateaus under Austrian control, all heavily fortified. From the north, at the eastern margin of the Julian Alps, we can point out the Bainsizza Plateau and the Carso Plateau.

In between the two, the city of Gorizia constituted an impregnable strong point, covered by Austrian positions on the mounts Sabotino, Podgora, Santo, San Gabriele, and San Michele.¹¹⁹ The Carso Plateau, reaching a maximum elevation of 500 meters (1640 feet), offered a particular type of terrain, composed of a harsh yet fragile nature of rock formations and by a wide array of sinkholes. The historian Mark Thompson offers a detailed description of it, in his book *The White War: Life and Death on the Italian Front, 1915-1919*:

If you stumble, it is easy to break an ankle or cut yourself to the bone. Someone linked the Carso to an immense petrified sponge. It is a hydrologist's laboratory, a potholer's playground; fissures in the surface open into grottoes and caverns that lead deep underground. The largest holes, called dolinas, are conical, steep-sided depressions up to 200 or 300 metres [650 or 980 feet] across 50 metres [160 feet] deep. Formed by water erosion and often plugged with fertile red soil, they were oases of cultivation on the arid plateau, where otherwise only goats could forage.¹²⁰

¹¹⁹ Morisi, *Hell in the Trenches*, 70-72.

¹²⁰ Thompson, *The White War*, chap. 1.

In summation, the main characteristics of the Italian Front are inherently defined by the nature of its terrain that was, without a doubt, unique compared to the other European theaters of operations.¹²¹

With a picture of both the Western and Italian fronts, it is now possible to underscore the main differences between the two to complete the analysis of the different problem sets faced by the German and Italian armies in relation to trench warfare. First, the terrain of the Italian Front decisively favored the conduct of defensive operations by the Hapsburg Army. As already offered, at the beginning of the conflict, the Austrians controlled the most advantageous positions, and, except for the Caporetto offensive, this situation would only minimally change during the Great War.¹²² On the Western Front, the terrain did not significantly aid the German forces nor the French and British units. The only exception is related to the Flanders sector. Here the German Army was able to exploit the system of dams, canals, and ditches, negatively affecting the British Army in terms of maneuver and attrition.¹²³

Second, the Italian theater of operations saw a great limitation of maneuver in military operations. Often, the rugged and harsh terrain in the mountains slowed and canalized the movement of military units and dictated specific avenues of approach.

¹²¹ Morisi, *Hell in the Trenches*, 70-72. The Carpathian operations in 1915-1916 and the activities in Caucasus in 1914-1917 could represent a possible exception to this assertion. Nevertheless, neither the Carpathian mountains nor the Caucasus region incorporated the wide array of different environmental conditions and the same terrain characteristics present on the Italian Front.

¹²² *Ibid.*, 71.

¹²³ Ellis, *Eye-Deep in Hell*, 12.

Especially in the mountains, vehicles were often unusable, and access to railway hubs very scarce. It is not incidental that the idea of tanks flourished on the Western Front and did not take root in Italy during World War I. In these conditions, armored units would have been useless.¹²⁴ Differently, on the Western Front, maneuver was instead more influenced by congestion on the battlefield and the complex network of trenches.¹²⁵

Third, on the Italian Front, the conduct of logistical activities and communications with forward-deployed units was constantly plagued by the effects of terrain and weather, more so at high altitudes and during the winter. Most of the locations along the front, especially in the mountains, were far from villages, and there were no suitable paths and trails to reach them.¹²⁶ This also implied a greater strain on engineer construction units that often had to build roads where nothing previously existed. Moreover, given the severely restrictive nature of the terrain, logistical units had to rely heavily on personnel and animals, especially mules, to transport materials, supplies, and ammunition. This fact, together with the inherent difficulties tied to land navigation in this kind of environment, negatively affected the rate of supply cycles during the war. Similarly, on the Western Front, rain, mud, and floods represented a considerable hindrance to logistical activities,¹²⁷ but not to the same extent as the Italian Front.

¹²⁴ Morisi, *Hell in the Trenches*, 72.

¹²⁵ House, *Toward Combined Arms Warfare*, 19. See also Bull, *Stosstrupptaktik*, chap. 1.

¹²⁶ Morisi, *Hell in the Trenches*, 71-72.

¹²⁷ Gilbert, *The First World War*, 114. See also Ellis, *Eye-Deep in Hell*, 44-47.

Fourth, on the Italian Front, the employment of fire support was significantly limited due to the difficulty of moving heavy artillery pieces in mountainous areas and to the limited visibility caused by the presence of dense vegetation and by alpine weather, especially in the winter. Additionally, the effects of artillery shells on the Italian Front could vary, depending on the type of terrain and the weather conditions. On the one hand, artillery rounds exploding in the Carso area or the Alps area on rocky terrain were usually more lethal because of the further projection of steel and stone fragments.¹²⁸ On the other hand, more often than not, artillery shells landing on snow did not explode at all.¹²⁹ Considering the Western Front, rain, mud, and fog represented significant challenges to the employment of the artillery. These factors affected the positioning of artillery tubes, as well as visibility. Mud played a role similar to snow in stifling or nullifying the explosive effects of impacting rounds.¹³⁰

Last, the Great War was the first modern conflict that saw massive employment of firepower in the form of individual weapons, machine guns, and artillery. Nonetheless, on the Italian Front, the successful breaching of enemy defensive lines in the final part of an assault frequently ended in hand-to-hand fighting. Especially in the mountains, trenches and shelters composing strong points and defensive nodes had to be dug in the rock. Most of those entrenchments were positioned at inaccessible locations, with few escape routes. Therefore, for the defenders, close combat was the only alternative to annihilation by the

¹²⁸ Morisi, *Hell in the Trenches*, 72.

¹²⁹ Thompson, *The White War*, chap. 17.

¹³⁰ Jünger, *Storm of Steel*, 159.

attackers.¹³¹ Quite differently, in Western Europe, rarely an offensive action ended in combat *à l'arme blanche*. The terrain allowed the execution of a defense in depth, granting the defenders the possibility of falling back when overwhelmed by the attackers.¹³² In these conditions, bayonets, daggers, and clubs were the weapons of choice during the conduct of trench raids or patrols in no man's land, to quickly dispatch sentries or unexpected encounters during the action.

In conclusion, the tactical problem of trench warfare had different flavors on the Western and Italian fronts. The peculiar combination of conditions and limitations of each theater resulted in diverse contexts. On the one hand, military culture, doctrine, training, materials available, and leadership processes undoubtedly shaped the options devised by each military organization in overcoming the stasis of the battlefield. On the other hand, the specific circumstances in which each institution found itself inevitably influenced the adopted solutions. Defining terminology, outlining the factors determining the initial unpreparedness of the Italian and German armies to break the deadlock of trench warfare, and visualizing the two distinct problem sets represented three necessary steps to take before moving on to the description and analysis of the *Sturmtrupps* and the *Arditi*.

¹³¹ Morisi, *Hell in the Trenches*, 72.

¹³² Morisi, *Hell in the Trenches*, 72. See also Bull, *Stosstrupptaktik*, chap. 1; Jünger, *Storm of Steel*, 238.

CHAPTER 3

STURMTRUPPS: THE ELITE ASSAULT UNITS OF THE GERMAN ARMY

Of all the stimulating moments in a war, there is none to compare with the encounter of two storm troop commanders in the narrow clay walls of a line. There is no going back, and no pity. And so everyone knows who has seen one or other of them in their kingdom, the aristocrat of the trench, with hard, determined visage, brave to the point of folly, leaping agilely forward and back, with keen, bloodthirsty eyes, men who answered the demand of the hour, and whose names go down in no chronicle.

–Ernst Jünger, *Storm of Steel*

Lastly, the formation of storm troops from the infantry, which had begun during the war, had not only to be regularized, but to be adapted to the common good. The Instruction Formations and the storm battalions had proved their high value both intrinsically and for the improvement of the infantry generally. They were examples to be imitated by the other men. But for this it was necessary to have a training manual prepared and this had not yet been done.

–General Erich Ludendorff, *My War Memories*

The third chapter of the present study illustrates the German elite infantry assault formations known as *Sturmtruppen*. The intent is to define an overall picture of this outfit, including its origins and history, its force structure, its selection, training, and, finally, its tactics. This chapter is key to create the necessary conditions to conduct the comparative analysis of the German and Italian assault units established during World War I.

In the introduction, we defined the creation of specialized assault units, as the German answer to the military problem posed by the deadlock of trench warfare at the beginning of 1915. However, before moving further in a detailed description of the *Sturmtruppen*, it is essential to take into proper consideration the actual function of the assault units in the German military institution's effort to solve the operational and tactical problem of trench warfare. At a first look, it may appear that the storm troops

contributed through direct participation in combat, as elite assault formations. The denomination of this unit, *Sturmtrupps* or *Stosstrupps*, translated as “storm troops” or “shock troops,” tends to bring the reader toward this conclusion. However, after a more thorough analysis, it becomes clear that the primary role of this outfit, upon its establishment by the German Army High Command (*die Oberste Heeresleitung*, thereby called OHL), was an experimental and instructional one.¹³³

More precisely, Lieutenant Colonel Max Bauer, head of the Operations Section of the General Staff, established the very first assault detachment to create “a laboratory where new techniques could be tried out and a school where they could be taught.”¹³⁴ Without a doubt, this approach was in line with the great attention to tactics typical of the German military culture. In addition, it was coherent with the typical habit of German officers to continuously assess and question the methods used in battle, in pursuit of a higher degree of military effectiveness.¹³⁵ Besides, the use of combat units to test new equipment and develop proper tactics, techniques, and procedures (TTP) was common practice in the German Army, with a tradition that dated back to the introduction of the

¹³³ Gudmundsson, *Stormtroop Tactics*, 46-47. See also Samuels, *Doctrine and Dogma*, 14; Samuels, *Command or Control?*, 239; Bull, *Stosstrupptaktik*, chap. 5, Kindle.

¹³⁴ Gudmundsson, *Stormtroop Tactics*, 47.

¹³⁵ Gudmundsson, *Stormtroop Tactics*, 91-93, 174, 176. See also Robert T. Foley, “A Case Study in Horizontal Military Innovation: The German Army, 1916-1918,” *Journal of Strategic Studies* 35, no. 6 (December 2012): 814-815, accessed January 19, 2020, https://www.researchgate.net/publication/241714696_A_Case_Study_in_Horizontal_Military_Innovation_The_German_Army_1916-1918.

Dreyse needle gun between 1830 and 1840.¹³⁶ The actual involvement of the *Sturmtruppen* in combat significantly contributed to consolidate their legend. However, this represented just another step in the experimentation process, aimed at testing newly developed techniques on the battlefield and providing a living example to the other soldiers.¹³⁷

Defining the role of the German assault units first hand is essential to give context to the *Stosstruppen* phenomenon during World War I, in relation to the issue of breaking the stalemate of trench warfare. As posited by Robert Foley, the German Army displayed a unique method of adaptation to the new reality of modern warfare, defined as a process of “horizontal innovation.” This singular phenomenon envisaged “new ideas” that “are spread *between* units, not from the high command down or from the frontline up. As a result, new, informal doctrine is formed by units learning from one another, rather than from centrally produced doctrine.”¹³⁸ The same author also specifies that, ultimately, the results of this process were enhanced by a “top-down” approach directed by OHL with a steady input from its subordinate units. The latter provided changes in the Army organization and the resources necessary to effectively implement the new TTPs.¹³⁹ With that being said, it is immediately evident the real significance of the *Stosstruppen*: they were not the umpteenth specialized unit in the OHL’s arsenal, but a key distributor of

¹³⁶ Gudmundsson, *Stormtroop Tactics*, 46.

¹³⁷ Samuels, *Doctrine and Dogma*, 22. See also Samuels, *Command or Control?*, 240.

¹³⁸ Foley, “A Case Study in Horizontal Military Innovation,” 803.

¹³⁹ *Ibid.*, 821.

tactical innovation developed through experimentation in combat. The history of assault formations is a clear testament to the dual nature of this outfit that constitutes a unique element of distinction from every other unit in the history of the German Army.

Origin and History of the *Stosstrupps*

The *Stosstrupps* lineage traces back to March 2, 1915, with the establishment of a *Sturmabteilung* (SA) (Assault Detachment) under the VIII Army Corps, on the behest of the War Ministry, following a proposal of the Operations Section of OHL. Despite the name, this unit was an experimental outfit tasked with developing TTPs for the employment of a new weapon system, recently acquired by the German Army and called *Sturmkanone* (assault cannon).¹⁴⁰ This decision was part of the first attempts performed by the German Army, under the skillful guidance of the General Staff, to identify and explore suitable solutions to the stagnation of trench warfare.

More specifically, the creation of this unit was part of an overarching plan that included the activation of three *Front Versuchstruppen der OHL* (OHL's Front Experimental Units) in the first months of 1915. While the first, as already mentioned, was dedicated to the experimentation of the assault cannon, the second and the third were explicitly focused on the *Flammenwerfer* (flamethrower).¹⁴¹ and the *Minenwerfer* (trench

¹⁴⁰ Gudmundsson, *Stormtroop Tactics*, 46. See also Samuels, *Doctrine and Dogma*, 22.

¹⁴¹ During World War I, the *Flammenwerfer Abteilung* (flamethrower detachment), commanded by Captain Hermann Reddemann, underwent a development and expansion process very similar to the one typical of the *Stosstrupps*. This unit, formed out of a pioneer outfit, was upgraded to battalion level after the first successes reported in the battle of Verdun (February-July 1916), assuming the denomination of 3rd Guard Pioneer Battalion, composed of six line companies, battalion headquarters, a workshop detachment, and a small research team. Furthermore, in 1917, the unit reached

mortar).¹⁴² The reasoning behind this endeavor was to provide infantry units with the means to increase their firepower and effectively degrade the enemy defenses by suppressing or neutralizing the opponents' weapon systems, especially artillery and machine guns. The lessons of the first battle of Ypres (from October 19 to November 24, 1914) called for new ideas to facilitate the infantry advance through no man's land and the assault on the enemy defensive line.¹⁴³

The new Assault Detachment was a battalion (minus) level unit, composed of a headquarters (HQ) section, two pioneer companies, and field gun detachment. The latter included twenty 37-millimeter assault cannons, a lightweight piece of artillery designed by the German firm Krupp, to provide a mobile fire platform that could accompany infantry formations on the battlefield in a direct-fire support role.¹⁴⁴ Major Kalsow, an

regiment size, with the denomination of Guard Reserve Pioneer Regiment, with a strength of three battalions (12 battle companies). The Guard Pioneers were under the direct command of OHL, detaching *ad hoc* elements in support of selected units, as directed by higher. Bull, *Stosstrupptaktik*, chap. 3. See also Gudmundsson, *Stormtroop Tactics*, 44-45, 53. The expansion of the units from detachment to regiment is also confirmed in the German order of battle drafted by the British Military Intelligence in 1917. British War Office, General Staff (Intelligence), *Summary of Recent Information Regarding the German Army and His Methods* (London, UK: War Office, January 1917), 71.

¹⁴² Bull, *Stosstrupptaktik*, chaps. 3, 5. See also Samuels, *Command or Control?*, 88.

¹⁴³ Gudmundsson, *Stormtroop Tactics*, 43-44. See also Samuels, *Doctrine and Dogma*, 11-13.

¹⁴⁴ The first Assault Detachment was manned with personnel attached from *Ersatz* (supplementary or replacement) formations, which were formed on mobilization with the purpose of providing replacements to active duty units. Without doubt, supplementary personnel had a lower quality level than active duty soldiers. The historian Martin Samuels has two alternative explanations for this fact. On the one hand it could be an indicator that the OHL was not yet ready to invest heavily in this new project. On the other hand, this decision could have been a direct consequence of a shortage in

officer from *Pionier Bataillon 18*, was appointed as commander of the unit, which in typical German fashion, assumed the name of *Sturmabteilung* (SA) Kalsow. The detachment spent the months of March and April 1915 testing TTPs related to the employment of the new gun in combination with the use of steel shields. More precisely, the men of the field gun element learned to maintain, fire, and displace the *Sturmkanone*. In contrast, the personnel of the pioneer companies developed and tested techniques to facilitate the movement of the guns across no man's land, to breach obstacles, and to support infantry in the clearing of entrenched positions with shields. Of note, most of the training was conducted in a specially prepared area, with trench mock-ups available to simulate realistic battle conditions.¹⁴⁵ The attention to detail during training and rehearsals would characterize the German Army throughout the war, and it is a clear indicator of the level of importance attributed by the German military institutions to this kind of activity.

SA Kalsow was deployed on the front line in France in June 1915. The first results of the *Sturmkanone* experiment were discouraging.¹⁴⁶ In fact, the unit suffered almost 200 casualties and lost six cannons to enemy fire in the first two weeks, while the

manpower afflicting the German Army at the beginning of 1915, with two fronts open and numerous losses to replace after the first harsh battles of 1914. Samuels, *Doctrine and Dogma*, 14; Gudmundsson, *Stormtroop Tactics*, 46. See also Bull, *Stosstrupptaktik*, chaps. 3, 5.

¹⁴⁵ Samuels, *Doctrine and Dogma*, 14. See also Gudmundsson, *Stormtroop Tactics*, 46.

¹⁴⁶ Samuels, *Doctrine and Dogma*, 15. See also Gudmundsson, *Stormtroop Tactics*, 46.

new gun revealed to be not as effective as the OHL had hoped.¹⁴⁷ More specifically, although it had been designed to be lighter than the existing artillery pieces, it was still too cumbersome and difficult to move on the battlefield. In addition, the 37-millimeter shells did not reach the desired level of effectiveness on the enemy's protected position,¹⁴⁸ while the muzzle flash of the gun was prone to attract counter-battery fire from the opponent.¹⁴⁹ Most of all, the baptism of fire of the detachment underscored the unsuitability of the tactics devised for the employment of the assault cannon. The general concept envisaged an initial barrage granted by the supporting artillery, followed by the advance of a pioneer element tasked with breaching the enemy obstacles. With the way open, the *Sturmkanonen* were manhandled forward, as deep inside the enemy frontal positions as possible, covered by rifle fire provided by external infantry formations, in order to form a line and suppress or destroy any adversarial field gun or machine gun that had survived the artillery preparation fires. At this point, a mixed element of infantry and pioneers was ready to assault and clear the frontline trenches, with shields and grenades. This kind of tactic exposed the assault cannons too early to the threat of enemy machine guns and field guns, significantly hindering the possibility of laying suppressive fire on enemy weapons. This, in turn, meant that the assaulting elements had not adequate fire support during their movement toward the enemy trenches.¹⁵⁰ In Kalsow's defense, the

¹⁴⁷ Samuels, *Doctrine and Dogma*, 15.

¹⁴⁸ Bull, *Stosstrupptaktik*, chaps. 3, 5.

¹⁴⁹ Samuels, *Doctrine and Dogma*, 15.

¹⁵⁰ *Ibid.*, 15-16.

historian Bruce Gudmundsson posits that the Assault Detachment was poorly employed in combat. More precisely, he maintains that the supported infantry commander positioned the assault cannons in the rear of the German trench line. At the same time, the pioneers were integrated into line infantry formations, thus relegating the SA to a purely defensive role.¹⁵¹ Nonetheless, it is likely that Major Kalsow did not exercise adequate coordination with the supported infantry commander. As a matter of fact, in the German Army, it was common practice for the leadership of a formation supported by a specialist outfit to heavily rely on the advice of the attached unit's leader in terms of employment, rank notwithstanding. This fact could be an indicator that Major Kalsow had probably not fully understood the role of his detachment.¹⁵² This appears even more probable, considering that Kalsow took command of the *Sturmabteilung* in May 1915, possibly having little or no influence in the development of tactics related to the employment of the *Sturmkanone*.¹⁵³ Overall this first experiment highlighted an excessive focus on the weapon itself, in terms of unit task organization and TTPs.

Regarding the first point, although the structure of the *Sturmabteilung* showed an embryonic form of combined arms logic, it also displayed a preponderance of pioneers in its ranks. In pre-war German doctrine, the engineers were generally experts in siege warfare, so entitled to breaching techniques, and to the emplacement and often the

¹⁵¹ Gudmundsson, *Stormtroop Tactics*, 46. See also Samuels, *Doctrine and Dogma*, 15.

¹⁵² Samuels, *Doctrine and Dogma*, 15.

¹⁵³ *Ibid.*, 16-17.

maintenance of specific weapons systems.¹⁵⁴ Moreover, the combat engineer branch had the institutional role of testing experimental materials.¹⁵⁵

Concerning the tactics employed, the advance of the assault elements to the enemy trenches depended on the emplacement of the Krupps gun, meant to guarantee the suppression of enemy machine guns and field artillery pieces. With that said, it is evident there was an overreliance on the cannon itself, accompanied by a worrying assumption that the deployment of a line of field guns would have sufficed to effectively counter the threat represented by enemy weapons.

On August 28, 1915, the OHL relieved Major Kalsow and, on September 8, 1915, appointed Captain Willy Martin Ernst Rohr as the new commander of the *Sturmabteilung*. Lieutenant Colonel Bauer, head of the OHL Operations Section, played a central role in determining this outcome. The main reason for the change in command was not related to the negative results reported during the first tests in combat. Instead, Bauer's decision was underpinned by the idea that Major Kalsow was not the right officer for the task at hand. In fact, in Bauer's view, Kalsow did not grasp the real intent of the OHL to establish the experimental unit, and, instead, led it as a standard pioneer outfit.¹⁵⁶

The choice of Captain Rohr as a replacement to Major Kalsow reflected Bauer's vision for the development of the SA. An active-duty infantry officer with nineteen years of experience, Captain Rohr had served in a variety of roles, from platoon commander to

¹⁵⁴ House, *Toward Combined Arms Warfare*, 13.

¹⁵⁵ Samuels, *Command or Control?*, 88.

¹⁵⁶ Samuels, *Doctrine and Dogma*, 16-17. See also Gudmundsson, *Stormtroop Tactics*, 47.

non-commissioned officer (NCO) instructor and company commander. His previous posting had been as a company commander in the *Garde-Schützen-Bataillon* (Guard Rifle Battalion). This unit was part of the 18 active-duty light infantry independent battalions considered elite formations among the infantry branch of the German Army. The other 17 battalions of this selected group were *Jäger-Bataillone* (Huntsmen Battalions).¹⁵⁷ These outfits had two main points in common, which are significant in characterizing the choice made by Bauer.

First, these battalions displayed an atypical force structure, compared to the other standard infantry battalions at the beginning of the war. These organizations included four light infantry companies, one machine gun company, and one company of cyclists, whereas the standard infantry battalion had only four riflemen companies. As a matter of fact, the machine gun companies, as already mentioned in Chapter Two, were allocated at the regimental level in the standard infantry formations.

Second, the light infantry independent battalions displayed a peculiar military culture that prized aggressiveness, flexibility, and courageousness. Most of the *Jäger* soldiers were foresters, huntsmen, and outdoorsmen. These battalions had scored a remarkable tactical breakthrough well before the beginning of the Great War, refining the concept of open-order tactics, with impetus and fluidity on the battlefield. Part of this “natural predisposition” was also tied to the remarkable counter-insurgency experience built by these units when seconded to the British Army during the American War of

¹⁵⁷ Samuels, *Doctrine and Dogma*, 18.

Independence.¹⁵⁸ As maintained by Martin Samuels, the *Garden-Schützen* had created their own elite assault company at the beginning of March 1915, and it is likely that Captain Rohr was its commander.¹⁵⁹

In summation, Bauer's choice was relevant for two main reasons. First, he handpicked an officer that had a considerable awareness of the relevance of firepower on the battlefield, and experience in employing machine gun units. Second, Captain Rohr came from an elite unit, famous for its effectiveness and reliance on decentralized tactics and aggressiveness.¹⁶⁰ In hindsight, Captain Rohr's appointment was critical in overcoming the first setbacks of the project and in transforming "an experimental pioneer unit into an elite infantry organization."¹⁶¹ Moreover, Rohr's previous experiences as an instructor at the NCO Cadet School and the Infantry Marksmanship School were to play a pivotal role in setting the standards of the SA, both in regard to marksmanship and the training of other formations.

Upon the designation of the new commander, the experimental unit assumed the denomination of SA Rohr and was assigned to General Gaede's *Armee Abteilung* (Army Detachment). General Gaede appeared very supportive of the new outfit, conceding Captain Rohr a considerable degree of latitude. The only explicit guidance given to the

¹⁵⁸ Gudmundsson, *Stormtroop Tactics*, 78.

¹⁵⁹ Samuels, *Command or Control?*, 89. See also Samuels, *Doctrine and Dogma*, 18.

¹⁶⁰ Samuels, *Command or Control?*, 89. See also Samuels, *Doctrine and Dogma*, 18.

¹⁶¹ Gudmundsson, *Stormtroop Tactics*, 47.

new Commanding General, was for Captain Rohr to devise the training of his detachment “according to the lessons he had learned during his front line service” in the Guard Rifle Battalion.¹⁶² General Gaede also reinforced the SA with a machine gun platoon (two Model 1908 Maxim machine guns), a trench mortar platoon (four light trench mortars), and a flamethrower platoon (six portable flamethrowers).¹⁶³

Gudmundsson posits that this decision represented a turning point in the history of the unit, setting the stage for the development of small unit tactics with a strong combined arms flavor, and breaking the previously sacred organizational rule envisaging uniformity in terms of structure and equipment for infantry formations. However, this could have been unintentional on Gaede’s side. In fact, it appears more likely that the General’s decision was based on the idea of providing Captain Rohr with the means necessary to replicate a “microcosm” of supporting arms, akin to that of a regiment or a division.¹⁶⁴

After his designation, Captain Rohr immediately began a transformation of the TTPs previously developed through a variety of tests with different weapons. First, he

¹⁶² Helmuth Gruss, “*Aufbau und Verwendung der deutschen Sturmabteilungen im Weltkrieg*” [“Build-up and Employment of the German Assault Battalions during the World War”] (unpublished Ph.D. diss., Berlin University, Berlin, Germany, 1939), 21, quoted in Gudmundsson, *Stormtroop Tactics*, 47.

¹⁶³ Gudmundsson, *Stormtroop Tactics*, 47. See also Samuels, *Doctrine and Dogma*, 18.

¹⁶⁴ In the German doctrine of the time, regiments and divisions were the only units at the low tactical level characterized by a combined arms force structure. Infantry battalions included only line companies, with the only exception of the *Garden-Schützen* and the *Jäger* battalions. Gudmundsson, *Stormtroop Tactics*, 48.

focused on the accompanying artillery (*Nahkampfbatterien* or close-combat batteries).¹⁶⁵ The *Sturmkanone* had proven an unreliable weapon system, so it was necessary to identify a new fire platform, capable of providing adequate firepower while retaining sufficient mobility. The experimentation led to the adoption of the Russian Putilov 76.2-millimeter field gun. Many of these cannons had been captured from the Russian Army in Poland and Ukraine at the beginning of 1915.

The first prototypes, christened *Infanterie Geschützen* (infantry guns), were created modifying the standard Russian gun by lightening the carriage, shortening the barrel and removing the long-range sights. In this way, the gun was optimized for mobility while it retained precision at a range of one thousand meters. Therefore, Captain Rohr established his own organic fire support, with enough precision and firepower to knock out enemy machine gun and field gun emplacements. Additionally, organic field artillery retained a higher degree of responsiveness to counter unexpected threats than the standard indirect-fire artillery, which needed complex coordination when employed outside the initial scheme of fires.¹⁶⁶

Furthermore, Captain Rohr directed an array of experiments focused on protection for the assaulting troops, in the guise of steel shields and breastplates. These efforts led to discarding this kind of approach, deeming speed and violence of action the keys to the protection of soldiers while crossing no man's land. The only useful protective item that

¹⁶⁵ Samuels, *Command or Control?*, 90.

¹⁶⁶ Gudmundsson, *Stormtroop Tactics*, 48-49.

survived this testing phase was the steel helmet (*Stahlhelm*) that would have become a symbol of the German forces for the next 40 years.¹⁶⁷

In only five weeks, Captain Rohr was able to analyze and adapt the existing TTPs, developing an initial *Stosstruppgedanke* (assault-squad concept) and laying the basis for the advancements that were made later.¹⁶⁸ In this respect, collaboration with Captain Reddemann, the commander of the experimental flamethrower unit, later to become the 3rd Guard Pioneer Battalion, was critical. The high degree of integration between the *Stosstrupps* and the flamethrower formations became, in fact, a distinct feature throughout the Great War.¹⁶⁹ The assault concept was structured on three main principles: the replacement of skirmish lines with independent movement of squad size formations, the coordinated use of supporting arms, and the rolling up of enemy trenches with hand grenades in the assault.¹⁷⁰

SA Rohr tested the newly-devised techniques in combat between October 1915 and February 1916, when the unit was transferred near Verdun to contribute to the major

¹⁶⁷ Ibid., 48.

¹⁶⁸ Samuels, *Doctrine and Dogma*, 18. See also Samuels, *Command or Control?*, 89-90.

¹⁶⁹ As posited by Samuels, the strong degree of integration, coordination and collaboration between the assault units and the flamethrower unit is indicated also by the fact that the term *Stosstrupps* was actually invented by Captain Reddemann to define his own flamethrowers squads and later adopted also by the storm battalions. Samuels, *Doctrine and Dogma*, 50.

¹⁷⁰ The rolling-up technique, also called *Aufrollen* technique, was invented by Lieutenant Beumelburg of 2nd Pioneer Battalion in 1914 and was already a consolidated reality in the German Army when Captain Rohr decided to include it in his concept. Gudmundsson, *Stormtroop Tactics*, 35, 49. See also Samuels, *Doctrine and Dogma*, 18; Rommel, *Infantry Attacks*, 72.

German offensive there. In this timeframe, there were two significant battles to mention. The first was an attack with limited objectives against French formations, carried out in the area of the Vosges called *Schräntzmannle*. On October 12, 1915, the 2nd Pioneer Company of the detachment, supported by elements of the 187th Infantry Regiment, conducted a raid against French positions that achieved complete success with minimal losses. A storm company team crossed no man's land under the protective fire of six large flamethrowers and assaulted the enemy trenches, with limited indirect-fire support, mainly oriented to counter-battery tasks.

The second action worthy of remark was the battle of *Hartmannsweilerkopf*, another location in the Vosges region. In this case, on January 16, 1916, the entire assault detachment spearheaded a successful attack conducted by two infantry regiments against positions held by the elite French *Chasseurs Alpins* (Mountain Hunters), achieving another spectacular success. During this second action, the detachment operated in full strength, leveraging a strong artillery-infantry integration. This included the execution of an initial preparatory barrage aimed at suppressing enemy artillery and machine guns, integrated by a "box barrage," that isolated the target area and disrupted enemy communications, reserves, and command posts.¹⁷¹

The commitment of SA Rohr in combat between October 1915 and February 1916 showed the effectiveness of the new TTPs, further refined because of the lessons identified during various operations. The possibility of testing the soundness of the new techniques guaranteed further confirmation of the effectiveness of *Stosstrupptaktik*

¹⁷¹ Gudmundsson, *Stormtroop Tactics*, 49-50, 51-53. See also Samuels, *Doctrine and Dogma*, 19; Bull, *Stosstrupptaktik*, chaps. 3, 5.

(assault squad tactics). In light of that, General Gaede directed SA Rohr to begin the first training courses in favor of other infantry formations. As previously stated, the rationale behind this endeavor was to spread the newly developed and proven TTPs to the infantry branch, increasing the effectiveness of the German Army as a whole. With these premises, the first training cycle started in December 1915 for selected officers and NCOs of the 12th *Landwehr* Division.¹⁷² This was followed by a second cycle held between January and February 1916 to cadres of the 8th Bavarian Reserve Division.

According to Samuels, it appears plausible that other small courses were run in this time frame. Overall, the first instructional activities could only focus on the basics because the time allocated was too limited to do otherwise. The fact that the trainees were all already experienced soldiers partially mitigated the issue related to the time available. On Rohr's orders, the new courses also incorporated the lessons learned from the most recent engagements.¹⁷³

In early February, the storm detachment was transferred from the Vosges to Lorraine and placed under the Fifth Army, commanded by the Crown Prince Wilhelm. From February to July 1916, SA Rohr was employed in the framework of the Verdun offensive, providing instructions to other units and detaching task-organized elements in support of other formations during operations, in close coordination with Reddemann's flamethrower squads. The instructional role of SA Rohr during the Verdun offensive proved to be significant. The execution phase of this battle was preceded by a thorough

¹⁷² Gudmundsson, *Stormtroop Tactics*, 50. See also Samuels, *Doctrine and Dogma*, 22; Bull, *Stosstrupptaktik*, chaps. 3, 5.

¹⁷³ Samuels, *Doctrine and Dogma*, 22-23.

preparation that included full dress rehearsals from the company to the division level. In this context, the presence of the SA led the other infantry units of the Fifth Army to establish “spontaneous” unofficial assault outfits, some of which were trained by Rohr’s men.¹⁷⁴

The appearance of unofficial assault outfits that relied on techniques similar to those used by SA Rohr was not a novel practice. One of the best examples is the 124th *Württemberg* Infantry Regiment. In the summer of 1915, this formation conducted two offensive operations applying tactics that displayed uncanny similarities with Rohr’s ones, with the sole exception of the lack of infantry guns, whose role was replaced by supporting artillery. The *Garden-Schützen* Battalion had established its own assault company in March 1915, before Rohr was even assigned to *Sturmabteilung*. However, the presence of SA Rohr intermixed with other formations, especially during the conduct of operations, catalyzed the “horizontal process” of innovation in tactics.¹⁷⁵

Regarding the combat role of *Sturmtrupps* in the Verdun offensive, SA Rohr operated in support of the nine divisions of the Fifth Army, with the task of spearheading their offensive efforts. Selected infantry battalions could receive a supporting element of storm troopers from squad to company size, depending on the expected level of adversarial resistance. The employment in battle confirmed once again the effectiveness

¹⁷⁴ As posited by Gudmundsson, the unofficial assault units that emerged in this period tended to be called *Handgrenatentrupps* (grenade squads) or *Sturmtrupps* (assault squads). Apparently, the distinction between the two was not limited to their role in battle, but rather to the actual training they received in the assault tactics. More specifically, the units which did not undergo a training course held by SA Rohr were simply denominated grenade squads. Gudmundsson, *Stormtroop Tactics*, 59-60.

¹⁷⁵ Gudmundsson, *Stormtroop Tactics*, 91-92.

of *Stosstrupptaktik*. However, during the Verdun offensive, the losses suffered by SA Rohr were alarmingly more numerous than the ones reported in the Vosges. This situation was the result of the combination of two factors. On the one hand, these casualties partially derived from the comprehensible attrition related to an overuse of the detachment in the Verdun Campaign (there was just one battalion-size unit to support an entire army).

On the other hand, and most worryingly, the excessive number of losses was ascribable to a poor employment of the unit, caused by the supported commanders' ignorance of Rohr's method. Often the SA junior leaders were not allowed to conduct proper reconnaissance of the enemy positions and a thorough rehearsal of the assault. Even worst, Rohr's pioneers were often employed as ordinary engineers, and the *Sturmabteilung's* machine gun units were commandeered as replacements for the supported formations' ones. For these reasons, in March 1916, the detachment was relocated to Beauville, near Verdun, far from the front line, with the order of focusing their efforts on training and the conduct of instructional courses. Nonetheless, they continued to provide supporting elements of assault troops and heavy weapons teams throughout the campaign until its end in July 1916.¹⁷⁶

During the offensive of Verdun in 1916, the OHL realized that SA Rohr lacked the capacity to simultaneously cover a combat and instructional support role.¹⁷⁷ Although the storm detachment successfully conducted training courses in favor of other units in

¹⁷⁶ Gudmundsson, *Stormtroop Tactics*, 64-65.

¹⁷⁷ *Ibid.*, 77.

this time frame, the overall impression was that “little progress was achieved.” The temporary suspension of training courses, necessary to train the assault detachment’s replacements for the losses suffered during this campaign, further reinforces this concept.¹⁷⁸

As a direct consequence, the OHL enacted three concurrent measures. First, it ordered the upgrade of SA Rohr to full-battalion level strength. This enlargement was achieved with a further attachment of two pioneer companies, for a total of four. In addition, the machine gun platoon was expanded to company size (six heavy machine guns), and the infantry gun element was replaced with a mountain light howitzer company (Ehrhardt 75-millimeter guns). On April 1, 1916, the detachment assumed the denomination of *Sturmbataillon* (Assault Battalion) Rohr.¹⁷⁹

Second, in June 1916, four *Jäger* battalions were sent to Beauville to undergo a conversion to assault battalions. However, the intensification of the Brusilov Offensive and the opening of the Rumanian front thwarted the OHL’s expansion project. As a result, three *Jäger* battalions out of four had to be reassigned to the Eastern Front.¹⁸⁰ On August 4, the Third *Brandenburg Jäger* Battalion was re-designated *Jäger-Sturm-*

¹⁷⁸ Samuels, *Doctrine and Dogma*, 23.

¹⁷⁹ Samuels, *Doctrine and Dogma*, 23. See also Gudmundsson, *Stormtroop Tactics*, 77.

¹⁸⁰ The so-called Brusilov Offensive was an offensive campaign carried out by Russian forces under the command of General Brusilov in the area of present-day western Ukraine from June, 4 to September 20, 1916. In regard to the Rumanian Front, this was opened following the declaration of war enacted by the Rumanian Government to the Central Powers on August 27, 1916.

Bataillon 3 (3rd *Jäger*-Assault-Battalion) and assigned to the Second Army.¹⁸¹ The new outfit had four *Jäger* companies, one machine gun company, one company of cyclists, one infantry gun battery (six converted Russian field guns), a trench mortar detachment (eight light trench mortars), and a flamethrower platoon (six portable flamethrowers).¹⁸²

Third, on May 15, 1916, General Erich von Falkenhayn, head of OHL, ordered the Third, Fourth, Sixth, and Seventh armies, as well as Army Detachment Strantz, to send two officers and four NCOs each to Beauville, to be trained by Rohr's battalion. The overarching intent was for each army to create provisional assault detachments, selected and trained by the cadres undergoing Rohr's course, so cutting some slack for the official assault battalions.¹⁸³ The size, structure, method of control of the new provisional detachments varied, depending on the decisions of each army commanding general. However, these new units were not standing ones but tended to be assembled for *ad hoc* necessities, such as attacks with limited objectives or raids. The intent behind this choice was to safeguard the conventional formations and avoid massing the most capable soldiers of each army in one or a few special units. These outfits also assumed a wide variety of names, such as *Sturmtrupp* (assault squad), *Sturmschule* (assault school),

¹⁸¹ Gudmundsson, *Stormtroop Tactics*, 80. See also Samuels, *Doctrine and Dogma*, 23-24.

¹⁸² Gudmundsson, *Stormtroop Tactics*, 80.

¹⁸³ Gudmundsson, *Stormtroop Tactics*, 80-81. See also Samuels, *Doctrine and Dogma*, 24-25; Lupfer, *The Dynamics of Doctrine*, 28.

Lehrabteilung (instruction detachment), *Jagdkommando* (hunting commandos) and *Patrouillentrupp* (raid troop).¹⁸⁴

¹⁸⁴ As posited by Gudmundsson, although the majority of the assault formations established in this period were brought together only for specific activities, there were also few permanent units. An example is the Assault Detachment (*Sturmabteilung*) of the Naval Corps. A second example is the Assault Squadron (*Sturmeskadron*) formed in the ranks of the 4th Dismounted Cavalry Division. These two outfits followed the model of the assault battalions, with the same training regimen and privileges. Their men were even authorized to wear special insignia. Gudmundsson, *Stormtroop Tactics*, 80-81. Wilhelm Balck, in his treatise *Development of tactics–World War*, specifically mentions the pitfalls related to the use of the best men of ordinary military units in forming special detachments. Therefore, the practice of assembling the specially-trained troopers of the provisional assault formations only for specific and difficult tasks is, in fact, to be seen as a mitigation of the risk of depleting ordinary units of their most skilled elements. Wilhelm Balck, *Development of Tactics–World War*, trans. Harry Bell (Fort Leavenworth, KS: The General Service Schools Press, 1922), 85-86.

Table 1. Formations Fielding Sturmabteilungen on the Western Front, November 1916

First Army:	15th, 16th, 103d, 113th Active Divisions 6th Bav., 7th, 9th, 10th Reserve Divisions 4th, 5th, 8th Ersatz Divisions XIX Corps
Second Army:	38th, 1st Gd., 2d Gd. Active Divisions 44th, 46th Reserve Divisions
Third Army:	Due to constant movement only a few small units existed.
Fourth Army:	117th, 123d Active Divisions 5th Ersatz Division Marine, XXIII and XXVI Reserve and XIII Corps
Fifth Army:	Due to constant movement only a few small units existed.
Sixth Army:	3d, 4th, 5th, 7th, 8th Bav. Active Divisions 23d, 24th Reserve Divisions 28th Landwehr Brigade Due to losses on the Somme, assault units of four other divisions required complete rebuilding.
Seventh Army:	185th, 213th Active Divisions 16th, 45th Reserve Divisions 47th Landwehr Division I Bav. Reserve Corps
Armee Abteilung A:	Every regiment
Armee Abteilung B:	Every division
Armee Abteilung Strantz:	Every division, but due to losses, many required rebuilding.
Gruppe Madra:	Every division
Gruppe Francois:	Every regiment
Gruppe Lochow:	Every company

Source: Martin Samuels, *Doctrine and Dogma: German and British Infantry Tactics in the First World War* (Westport, CT: Greenwood Press, 1992), 21, table 1. Quoted in Helmuth Gruss, *Aufbau und Verwendung der deutschen Sturmbataillone im Weltkrieg* [Build-up and Employment of the German Assault Battalions during the World War] (Junker und Dunnhaupt, 1939), 48-50.

On August 20, 1916, General von Falkenhayn was replaced by Field Marshal Paul von Hindenburg, previously the commander in chief of the German forces on the Eastern Front. On the same date, Lieutenant General Erich Ludendorff assumed the position of

First Quarter Master General.¹⁸⁵ After the change in the German Army senior leadership, Lieutenant Colonel Bauer and the Crown Prince Wilhelm, both strong supporters of Rohr and of the *Stosstrupps* idea, submitted the *Sturm bataillon* project to the attention of General Ludendorff. This influential officer, who would be key to the process of innovation in the German Army in terms of offensive and defensive tactics,¹⁸⁶ understood the instrumental role of the *Stosstrupps* in promoting change in the German military organization and bringing “a return to the war of grand maneuvers” on the Western Front.¹⁸⁷

For this reason, not only Ludendorff maintained the line already set by von Falkenhayn but also decided to push his support even farther. On October 23, 1916, he ordered that each army on the Western Front established its organic assault battalion. As a result, by December 1916, every army in the Western Front, and each army or army group in the Eastern Front had its own assault outfit.¹⁸⁸ Overall, 18 official *Sturm bataillone* were formed, for a total of 41 assault companies.¹⁸⁹ The newly

¹⁸⁵ The position of First Quartermaster General was the most senior staff position in the German General Staff, the primary staff officer assisting the head of OHL. Lupfer, *The Dynamics of Doctrine*, 8.

¹⁸⁶ *Ibid.*, 8-11.

¹⁸⁷ Gudmundsson, *Stormtroop Tactics*, 84.

¹⁸⁸ Samuels, *Command or Control?*, 241. The field armies on the Eastern Front were not explicitly mentioned in Ludendorff’s order. However, as maintained by Lupfer, they chose to follow the lead of the higher-echelon units on the Western Front, activating their own *Sturm bataillone*. Lupfer, *The Dynamics of Doctrine*, 43-44.

¹⁸⁹ Samuels, *Doctrine and Dogma*, 25. In this regard, Gudmundsson maintains that the total number of assault formations created as a result of Ludendorff’s directive were 15, with two additional independent assault companies. See Gudmundsson, *Stormtroop Tactics*, 84. This minimal difference could be a consequence of the difficulty

established assault formations inherited the structure of Rohr's battalions, with two to four infantry companies, one to two machine companies, a light trench mortar company, an infantry gun battery, and a flamethrower platoon.¹⁹⁰ It is important to underscore that, as per OHL's direction, the assault battalions had to assume an instructional role primarily, with the possibility of being employed as combat units in selected attacks with limited objectives and raids.¹⁹¹

to precisely register all the transformations of the German Army in time of war. It is safe to assume that the process of transformation was highly dynamic and conducted in a very limited time. Thus, the discrepancies in different primary sources could be plausible.

¹⁹⁰ The flamethrower platoons were independent formations belonging to Capt. Reddemann's 3rd Guard Pioneer Battalion, later to become the 3rd Guard Pioneer Reserve Regiment. Gudmundsson, *Stormtroop Tactics*, 84.

¹⁹¹ Gudmundsson, *Stormtroop Tactics*, 84. See also Samuels, *Doctrine and Dogma*, 25.

Table 2. Parent Formations of the *Sturmbataillone*

<u>Sturmbataillon</u>	Parent Unit	Front	Date Formed
1.	First Army	Western	19.10.16
2.	Third Army	Western	23.12.16
Jäger 3.	Second Army	Western	20. 8.16
4.	Fourth Army	Western	9.12.16
5.(Rohr)	Fifth Army	Western	2. 3.15
6.	Sixth Army	Western	4.12.16
7.	Seventh Army	Western	4.12.16
8.	Sudarmee	Eastern	28.12.16
9.	Ninth Army	Eastern	18.12.16
10.	Gruppe Eichorn	Eastern	28.12.16
11.	Gruppe Linsingen	Eastern	28.12.16
12.	Gruppe Woyrsch	Eastern	28.12.16
St.Coy. 13.	Korps von Eben	Eastern	28.12.16
14.	Armee Abt. Strantz	Western	23.12.16
15.(Bav.)	Armee Abt. A	Western	23.12.16
16.	Armee Abt. B	Western	23.12.16
17.	Erzherzog Karl	Eastern	7.12.16
St.Coy. 18.	Eighth Army	Eastern	7. 8.17
Italian	Fourteenth Army	Italian	1.10.17
Bulgarian	Bulgarian	Bulgarian	late 16

Notes

1. Sturmbataillone 8, 9, 10, 11, 12 and 17 and Sturmkompanie 13 each had an Austro-Hungarian assault company attached until November 1917.
2. Sturmbataillon 9 was dissolved in 1918, the men being sent to Sturmbataillone 5 and 12.
3. Sturmbataillon 11 was transferred to the newly-formed Nineteenth Army on the Western Front in February 1918.
4. Sturmbataillon 12 was transferred to the newly-formed Eighteenth Army on the Western Front in January 1918. It amalgamated with Sturmbataillon 7 in September 1918.
5. Sturmkompanie 13 amalgamated with Sturmbataillon 12 in March 1918.
6. Sturmbataillon 17 was transferred to the Fourth Army on the Western Front in November 1917.
7. Sturmkompanie 18 was formed from a company detached from Sturmbataillon 10. It was transferred to the newly-formed Eighteenth Army on the Western Front in April 1918 and was expanded to a battalion in August 1918.
8. The Italian Sturmbataillon was formed from Sturmbataillone 14 and 16.

Source: Martin Samuels, *Doctrine and Dogma: German and British Infantry Tactics in the First World War* (Westport, CT: Greenwood Press, 1992), 26, table 2. Quoted in Helmuth Gruss, *Aufbau und Verwendung der deutschen Sturmbataillone im Weltkrieg* [*Build-up and Employment of the German Assault Battalions during the World War*] (Junker und Dunnhaupt, 1939), 60-62, 65-66, 68, 70.

During 1917, the *Sturmbataillone* continued to lead the way in the German war effort, supporting combat operations, while also covering their instructional role. In

regard to the first point, assault formations played a critical part in enabling the conduct of attacks with limited objectives and raids, especially during the French “Nivelle” offensive in the spring,¹⁹² during the Austro-German offensive operations in Caporetto, on the Italian Front,¹⁹³ and during the German counteroffensive in Cambrai at the end of November.¹⁹⁴ In this respect, apart from the *Sturmtrupps*’ contributions in support of the respective parent organizations, their commitment was instrumental to further develop and refine *Stosstrupptaktik*, especially in fielding and developing TTPs for the integration of light machine guns in the assault squads.¹⁹⁵

Considering the instructional domain, the *Sturmabteilung* continued to organize and carry out training courses in support of their parent armies, contributing to spread the process of doctrinal and tactical innovation in the German Army in three main fields. First, the TTPs taught in their instructional courses facilitated the consolidation in the German infantry divisions of the counter-attack techniques envisaged in the *Principles of Command in the Defensive Battles in Position Warfare* published by OHL on December 1, 1916.¹⁹⁶

Second, through their instructional activities, the assault battalions promoted the diffusion of *Stosstrupptaktik* that would become a pillar of the German new offensive

¹⁹² Gudmundsson, *Stormtroop Tactics*, 103-104.

¹⁹³ *Ibid.*, 141.

¹⁹⁴ *Ibid.*, 141-142.

¹⁹⁵ *Ibid.*, 99-100.

¹⁹⁶ Lupfer, *The Dynamics of Doctrine*, 23, 27-29. See also Samuels, *Doctrine and Dogma*, 72-80.

method, officialized with the publication, *Attack in Position Warfare*, issued by OHL on January 1, 1918.¹⁹⁷ Third, in the winter of 1917-1918, the *Sturmabteilung* started to run courses for the instructors of the recruit training depots. This initiative covered the requirement of updating the *curricula* of the recruit training courses, with a marked focus on assault tactics. The OHL had ascertained that the instructions administered to the recruits “bore little relation to the realities of trench warfare.”¹⁹⁸ In sum, the *Sturmabteilung* played a critical role in the process of reconfiguration of the German Army formations to the new principles and TTPs concerning offensive and defensive operations during the entire course of 1917.

Between the end of 1917 and the beginning of 1918, the OHL, under the direction of General Ludendorff, implemented the last and final stage of the *Stosstrupps* project. This initiative saw the reconfiguration of about one-quarter of the overall infantry divisions in the German Army in *Angriffsdivisionen* or assault divisions.¹⁹⁹ More precisely, 56 out of a total of 195 infantry divisions were equipped and trained on the pattern of the *Stosstrupps* as a preparatory step to an offensive campaign planned for the

¹⁹⁷ Lupfer, *The Dynamics of Doctrine*, 42-43. See also Gudmundsson, *Stormtroop Tactics*, 149-151.

¹⁹⁸ Samuels, *Doctrine and Dogma*, 72-80.

¹⁹⁹ Gudmundsson, *Stormtroop Tactics*, 151. As reported by Lupfer, these divisions were also called *Stosdivisionen* (shock divisions) or *Mobilmachingsdivisionen* (mobilization divisions). Lupfer, *The Dynamics of Doctrine*, 48.

spring of 1918, which was later to become known as *Kaiserschlacht* (Emperor's battle)²⁰⁰ or Peace Offensive.²⁰¹

It is out of the scope of the present study to provide a tactical and operational analysis of this specific campaign. However, it is meaningful to underscore that this campaign represented the culmination of Ludendorff's conception of the *Stosstrupptaktik* as the way to bring back operational maneuver on the Western Front. He intended to score a decisive blow against the British formations to achieve separate peace negotiations before the US troops completed their build-up in Europe.²⁰² Aware of the impossibility of reconfiguring all the German infantry divisions in attack divisions due to economic and manpower issues,²⁰³ Ludendorff directed the OHL in identifying the ones having the most experienced soldiers and the higher percentage of active-duty personnel.²⁰⁴ The remaining infantry divisions were designated as *Stellungsdivisionen* (trench divisions) and tasked with maintaining the German defensive line on the Western Front.²⁰⁵

²⁰⁰ Lupfer, *The Dynamics of Doctrine*, 48. See also Jonathan B.A. Bailey, "The First World War and the birth of modern warfare" in *The Dynamics of Military Revolution, 1300-2050*, ed. Williamson Murray and McGregor Knox (Cambridge, UK: Cambridge University Press, 2003), 134.

²⁰¹ Gudmundsson, *Stormtroop Tactics*, 152, 155-156.

²⁰² *Ibid.*, 155-156.

²⁰³ Lupfer, *The Dynamics of Doctrine*, 48-49.

²⁰⁴ Gudmundsson, *Stormtroop Tactics*, 151.

²⁰⁵ Gudmundsson, *Stormtroop Tactics*, 152. See also Lupfer, *The Dynamics of Doctrine*, 48.

The contribution of the *Sturmataillone* to Ludendorff's plan, again, included both the instructional and the combat domains. On the one hand, the assault battalions facilitated the transformation of the infantry divisions in attack divisions through the administration of their courses. On the other hand, they spearheaded the attacks of the Second, Seventeenth and Eighteenth armies during the above-mentioned offensive in the five major operations held between March and July 1918.²⁰⁶ However, considering the significant progress made in the training of infantry formations, the creation of the attack divisions, and the tactical successes obtained in the Peace Offensive, the OHL started disbanding the assault battalions in August 1918. As reported by Samuels, by the end of the war, only 15 of the 41 official *Sturmkompanien* (assault companies) composing the 18 assault battalions, remained.²⁰⁷ As for *Sturmataillon 5*, or Rohr's assault battalion, after taking part in the *Kaiserschlacht*, it was later assigned to conduct training in support of Guard Cavalry units and Austrian units. Finally, at the end of the Great War, it covered the role of Army Headquarters Guard unit.²⁰⁸

Organization of the *Stosstrupps*

The analysis offered in this section of Chapter Three focuses on the “mature” forms of the German assault unit organizations, the *Sturmataillone*. As a necessary premise, the force structure adopted by the assault battalions during World War I went through considerable evolution. As posited by Samuels, this phenomenon was a direct

²⁰⁶ *Stormtroop Tactics*, 157-160, 162-166.

²⁰⁷ Samuels, *Doctrine and Dogma*, 27.

²⁰⁸ Bull, *Stosstrupptaktik*, chap. 5.

consequence of the OHL's decision to leave the last word in terms of task organization to the parent formations of the single assault unit. However, this was the only choice possible. A standardized approach would have been detrimental to coping with the specific situations each army faced in terms of conditions of their area of operations and availability of materiel and personnel.²⁰⁹ But most of all, the lack of a homogeneous task organization was the legacy of an unregulated creation of unofficial assault outfits before 1916. In fact, until October 1916, the evolutionary process of the *Stosstrupps* had not been a linear one. In parallel with the experiments of SA Kalsow and SA Rohr, other regiments went as far as devising "unofficial" assault tactics and designating *ad hoc* assault formations, as a way to "solve the riddle of trench warfare."²¹⁰

Upon assuming his new position at the head of the General Staff, Ludendorff recognized the unregulated nature of this phenomenon. Therefore, he decided to use a top-down approach to provide standardization at the battalion level, so ensuring a further consolidation of gains.²¹¹ The result was the convergence of most of the *ad hoc* and official assault outfits in 18 assault battalions and two assault companies. This step represented a significant stage of the evolution of the *Stosstrupps*, indeed, creating a catalyzing effect that brought together all the various experiences matured insofar in this specific field. As mentioned at the beginning of the chapter, this is, without a doubt, clear

²⁰⁹ Samuels, *Doctrine and Dogma*, 27.

²¹⁰ Gudmundsson, *Stormtroop Tactics*, 91.

²¹¹ Samuels, *Doctrine and Dogma*, 22. See also Samuels, *Command or Control?*, 240-241.

evidence of the process of “horizontal innovation” posited by Foley regarding the overall transformation of the German Army during the Great War.²¹²

Although the structure of the *Sturmabteilung* showed a certain degree of irregularity, it also maintained a distinctive pattern.²¹³ In particular, this was related to the “functional approach” adopted by the German Army in thinking about solutions to the problem of trench warfare.²¹⁴ More precisely, the German doctrine at the beginning of World War I started to differentiate the fighting power used by the military units at the low tactical level in *Feuerkraft* (firepower) and *Stosskraft* (assault power). The former was employed in a firefight and was necessary to attain fire superiority over the enemy, whereas the latter was focused on close combat, seen as the decisive form of combat in battle.²¹⁵

Among the main combat branches of the German order of battle, the infantry was the only one capable of employing both types of fighting power, whereas the cavalry and the artillery were relegated respectively to the use of *Stosskraft* and *Feuerkraft*. These ideas underpinned a conceptual framework that Captain Rohr and Lieutenant Colonel Bauer used to solve the problem of stagnation on the Western Front. In these terms, it is relevant to acknowledge that, for the German Army, the problem of overcoming the enemy defenses in trench warfare was mainly related to a “shift of effectiveness in the

²¹² Foley, “A Case Study in Horizontal Military Innovation,” 803.

²¹³ Samuels, *Doctrine and Dogma*, 27.

²¹⁴ *Ibid.*, 36.

²¹⁵ Samuels, *Command or Control?*, 61-62.

performance of function.”²¹⁶ In other words, the infantry battalion needed to differentiate the focus on *Feuerkraft* and *Stosskraft*, previously concentrated in the infantry company, in distinct functional elements. In this way, the infantry battalion would still have the organic means of achieving relative fire superiority on the enemy, while preserving his capability to assault the enemy positions.

The necessity to separate the two functions of firepower and assault power inside the infantry battalion was the consequence of two issues. First, rifle fire did not suffice anymore to reach fire superiority over an enemy formation in trench warfare. Second, the support that an infantry battalion could receive from the artillery at the beginning of the Great War was not adequate to the firepower requirements dictated by modern warfare. At the onset of the conflict, the artillery was trained to support infantry attacks mainly through direct fire. However, in trench warfare, this mode of employment rapidly became impossible to sustain, at least not without a grave cost in terms of losses.

Therefore, the artillery units were forced to resort to the use of indirect-fire techniques that resulted unsuitable for lending the required amount of firepower at the desired level of precision.²¹⁷ Nonetheless, later in the war, heavy artillery played a critical role in the provision of *Feuerkraft* to the attainment of relative fire superiority in battle, mainly in the guise of suppression. This happened because the artillery underwent its own evolution, in a process that was not dissimilar to that of *Stosstrupptaktik*, in terms of development and diffusion. Ultimately, both the employment of indirect fires and

²¹⁶ Samuels, *Doctrine and Dogma*, 36.

²¹⁷ Samuels, *Doctrine and Dogma*, 37-39. See also Samuels, *Command or Control?*, 90.

assault tactics would have merged in the German defensive and offensive doctrine.²¹⁸

Since the heavy artillery units were not organic to the *Sturmabteilung*, their specific role will be analyzed later in this chapter, in parallel with the explanation of the assault tactics proper.

The German functional solution encompassed the integration of organic *Truppwaffen* (squad weapons) into battalion-level assault formations to address the issue of the “inaccuracy and inflexibility of indirect fire artillery.” This transformation resulted instrumental in boosting the *Feuerkraft* of infantry formations, considering the unsuitability of the rifle in the fight for fire superiority in trench warfare. The *Sturmabteilung* first, and *Sturmabteilung* later, were the experimental models used by the OHL to define innovative solutions in organization and tactics. In addition, this differentiation of functions led to the demise of the pre-war notion of fielding identical equipment and structure for all infantry formations at the lower tactical level.²¹⁹

In line with the functional approach explained above, the common pattern that all the assault formations displayed throughout the war involved the combination of a heavy weapon and an assault component. More specifically, the basic organization of an assault battalion envisaged a headquarters element, an assault element, and a fire support element. The first, called *Stab*, usually included 10 officers and 32 enlisted (NCOs and soldiers). The second consisted of one to five *Sturmkompanien* (assault companies), with

²¹⁸ Gudmundsson, *Stormtroop Tactics*, 113-114. See also Bailey, “The First World War and the birth of modern warfare,” 149-153.

²¹⁹ Samuels, *Doctrine and Dogma*, 39-40.

an average of four officers and 213 enlisted (NCOs and soldiers).²²⁰ Every assault company incorporated three platoons.²²¹

The fire support element comprehended one to two *Maschinengewehrkompanien* (machine gun companies), one *Minenwerfer* (trench mortar) company, one *Infanterie-Geschütz-Batterie* (field gun battery), and one *Flammenwerfertrupp* (flamethrower platoon). The machine gun company structure varied significantly throughout the war, mainly due to the structural changes implemented by the OHL to all machine gun formations of the German Army. At the beginning of World War I, a machine gun company was composed of four officers and 85 men, with a total of six guns. At the end of the conflict, this kind of unit became a twelve-gun company, manned by four officers and 135 men. Independent assault companies had only one machine gun platoon. The mortar companies were composed of two officers and 108 soldiers and NCOs, with a total of eight light mortars. Again, independent assault companies included only one mortar platoon with four weapons.

The typical field gun battery of an assault battalion contained four to six field guns of different types with a total strength of 80 men.²²² The flamethrower platoon

²²⁰ The strength of an assault company was heavily influenced by the parent organization and by the type of unit the assault battalion was built upon. For example, the *Sturmkompanien* of the *Jäger-Sturm-Bataillon 3* retained the same strength typical of a *Jäger* company: five officers and 263 men. Samuels, *Doctrine and Dogma*, 28.

²²¹ British War Office, General Staff (Intelligence), *Handbook of the German Army in War, April 1918* (London, UK: Harrison & Sons, April 1918), 47.

²²² British War Office, *Handbook of the German Army in War*, 27-28. See also Gudmundsson, *Stormtroop Tactics*, 77, 80, 84-85; Lupfer, *The Dynamics of Doctrine*, 44. The composition of assault battalions is also mentioned in House, *Toward Combined Arms Warfare*, 35-36.

fielded four to eight portable projectors with an overall manning of one officer, nine NCOs, and 40 soldiers.²²³ It was routinely attached to assault formations, albeit remaining organic to the *Garde Reserve Pionier Bataillon*.²²⁴ Finally, some assault battalions, such as the *Jäger-Sturm-Bataillon 3*, had an organic transportation element with five trucks. The rationale behind this choice was to give the assault units the means to move personnel and material in between operations, so maintaining their troops as fresh as possible before an assault. This fact hints at the idea that *Sturmtrupps* retained a special status in the German Army. Considering the limited availability of motorized transports, other units at the battalion level did not have this kind of resources organically allocated to them.²²⁵

In sum, a *Sturmataillon* could reach a total strength of 1,400 men and truly was a combined arms formation. The amount and variety of heavy weapons concentrated in an assault battalion were atypical, even for a regiment before the beginning of the war, perhaps more akin to a division-level structure. However, this pattern was destined to become the standard for German infantry formations at the end of the Great War, setting the stage for the organizational structure of infantry units in the interwar period and during World War II.²²⁶

²²³ U.S. War Department, Historical Section, General Staff, American Expeditionary Forces (A.E.F.), *Tactical Studies No. 1: A Survey of German Tactics, 1918* (Washington, DC: Government Printing Office, 1918), 19. See also Samuels, *Doctrine and Dogma*, 28.

²²⁴ Samuels, *Doctrine and Dogma*, 28; Gudmundsson, *Stormtroop Tactics*, 44-45.

²²⁵ Gudmundsson, *Stormtroop Tactics*, 80.

²²⁶ Samuels, *Doctrine and Dogma*, 28.

In addition to the marked combined arms nature of the assault battalions, another truly innovative point was the adoption of the squad, or *Stosstrupp*, as the basic level of employment of the assault formations. Although the assault units conserved a structure based on battalions, companies, and platoons, typical of the standard infantry formations, they were rarely employed in combat operations using this particular framework. Instead, they usually split into *ad hoc* elements, task-organized depending on the situation, mission, and resources available, so attaining a high level of flexibility.²²⁷ Later in the war, these tailored units assumed the denomination of *Sturmblöcke* (assault blocks) or *Sicherungsblöcke* (security blocks), depending on the specific task in the overall scheme of maneuver. A task-organized element could include one or more assault squads, light machine gun squads, flamethrower squads, and one or two grenade launchers.²²⁸

Key to this method of employment was the basic assault squad, comprised of four to eight troopers, led by an NCO. This system derived from an evolution of the infantry squad of pre-war doctrine (*Gruppe*).²²⁹ and was also critical in the execution of the *Stosstrupptaktik*, described in detail later.²³⁰ As stated by Captain Rohr in the manual *Instructions for the Employment of an Assault Battalion (Anweisung für die Verwendung*

²²⁷ U.S. Army War College, *German and Austrian Tactical Studies: Translations of Captured German and Austrian Documents and Information obtained from German and Austrian Prisoners—from the British, French and Italian Staffs* (Washington, DC: Government Printing Office, 1918), 111. See also Samuels, *Doctrine and Dogma*, 51.

²²⁸ Gudmundsson, *Stormtroop Tactics*, 142.

²²⁹ Gudmundsson, *Stormtroop Tactics*, 19. See also Samuels, *Doctrine and Dogma*, 51; Balck, *Development of Tactics—World War*, 85.

²³⁰ Gudmundsson, *Stormtroop Tactics*, 50, 142. See also See also Samuels, *Doctrine and Dogma*, 51.

eines Sturmbataillones), published on May 27, 1916, a general rule of thumb was the assignment of two assaults squads to every infantry company deployed in the front line of an attack formation. The attachment of *Stosstrupps* to infantry formations was deemed proper only to support the execution of the most complex and difficult missions, to avoid committing the assault battalion as a whole.²³¹

Considering the command and control means of the time and the necessity of exploiting the terrain in the most advantageous way, the assault squad proved to be the most effective formation.²³² Most of all, the employment of squad-sized elements granted the possibility of exploiting every tactical opportunity on the battlefield, so maintaining the pressure on the enemy formations throughout an operation. More precisely, the focus on the small unit level was in line with the notion of “Directive Command,” which empowered a subordinate commander to take the initiative and make decisions oriented to the higher commander’s intent. This philosophy of command considered the leader on the ground, junior officer or NCO, in the best position to identify and exploit opportunities that could expedite attaining the envisaged end state.²³³ The reliance on squad-sized units had a significant effect on the way junior leaders were

²³¹ Gudmundsson, *Stormtroop Tactics*, 85. See also Samuels, *Doctrine and Dogma*, 51; Samuels, *Command or Control?*, 242.

²³² Samuels, *Doctrine and Dogma*, 50.

²³³ *Ibid.*, 87-89.

viewed in the assault organization, covering the role of tactical decision-makers and not mere executors of orders.²³⁴

To complete the picture of the *Sturmataillon*'s organizational dimension, it is appropriate to touch two further points: the mechanism of acquisition and replacement of personnel and the specific status that the assault units retained in the German military institution. Regarding the first, as posited by Gudmundsson, the OHL followed a principle of "planned obsolescence" in creating and expanding the *Sturmtruppen*.²³⁵ In detail, the assault units were conceived as means to test, develop, and spread new TTPs throughout the German Army. Hence, they were created as provisional units because once this process was over, they would have become redundant. German permanent formations had a specific geographical connotation, tied to towns and districts of the Empire. In the German military system, enlistment was managed at the local level. Moreover, in time of war, depots were established to train and prepare replacements to send to the front. Provisional units were not part of this regional framework: they had no colors, no home barracks in Germany, and no specific training depots to draw their replacements from.²³⁶

Although the *Sturmataillone* established barracks in occupied territories, such as France, Belgium or Russia, they had to base their manning cycle more on the depots of

²³⁴ Samuels, *Doctrine and Dogma*, 103, 174. See also Gudmundsson, *Stormtroop Tactics*, 85; Lupfer, *The Dynamics of Doctrine*, 43-44.

²³⁵ Gudmundsson, *Stormtroop Tactics*, 79, 86-87.

²³⁶ *Ibid.*

other units.²³⁷ This created significant issues regarding the acquisition of personnel, from the very beginning. In fact, many regiments were reluctant to send their best men to the assault battalions,²³⁸ considering them a convenient “dumping ground” to get rid of the underperformers in their ranks. This practice was particularly harmful to the *Stosstrupps* because of the importance they attributed to the quality of their personnel. Every man needed to display remarkable physical and intellectual skills to operate with the desired level of effectiveness, competence, and initiative on the battlefield, with little supervision by their superior officers. Although this issue was a consequence of the pragmatic approach adopted by the OHL, the High Command recognized this as an impediment to the implementation of the *Stosstrupptaktik* project and enacted three main mitigations.

The first coincided with the choice of converting four *Jäger* battalions to assault battalions in 1916. These elite units were permanent formations, so that they could rely on their own training depots.²³⁹ Second, after the establishment of the first two *Sturmbataillone*, the OHL put great emphasis on the importance of their instructional role and emplaced significant restrictions in the use of these formations in combat.²⁴⁰ The method of employment devised by Captain Rohr, recommending the use of squad-size assault elements in support of the infantry only for the most challenging missions,

²³⁷ Gudmundsson, *Stormtroop Tactics*, 79, 86-87.

²³⁸ Gudmundsson, *Stormtroop Tactics*, 79. See also Samuels, *Doctrine and Dogma*, 29.

²³⁹ Gudmundsson, *Stormtroop Tactics*, 79.

²⁴⁰ Samuels, *Doctrine and Dogma*, 29.

appears to be in line with OHL's intent and further reinforced this point.²⁴¹ Third, in May 1918, each *Sturmataillon* on the Western Front established its own field recruit depot.²⁴²

Although the assault battalions had been conceived as provisional units, they assumed an elite status in the German Army. At the beginning of 1917, at the behest of the OHL, every storm trooper was granted the title of “*Grenadier*,” a truly honorary status in the German military tradition. Only the soldiers of *Sturmataillon* Rohr and *Jäger-Sturm-Bataillon* 3 were given the titles of “*Pionier*” and “*Jäger*,” in acknowledgment of their specific origins. Moreover, the men of the assault units also received the honor to wear the “*Gardelitzen*” (Guard Braid).²⁴³ on their uniform, previously reserved only to the Prussian Guard formations. As the original Assault Battalion, *Sturmataillon* Rohr was further praised with the awarding of a crown insignia embroidered in silver thread sewn to the left sleeve of the jacket.²⁴⁴ On more pragmatic terms, other symbols of the special status of the *Stosstrupps*, meant to reward the dangerous nature of their role, included the provision of double rations, a more generous leave policy, an exemption from guard and trench duties, and a higher priority in terms of allocation of motorized transportation assets.²⁴⁵

²⁴¹ Samuels, *Command or Control?*, 242.

²⁴² Samuels, *Doctrine and Dogma*, 30.

²⁴³ The “Guard Braid” insignia was composed of two twin Roman numeral “I’s” sewn on the collar of the uniform. Gudmundsson, *Stormtroop Tactics*, 87.

²⁴⁴ Gudmundsson, *Stormtroop Tactics*, 87, 90. See also Samuels, *Doctrine and Dogma*, 29.

²⁴⁵ Samuels, *Doctrine and Dogma*, 80, 87. See also Bull, *Stosstrupptaktik*, chap. 5.

In summary, the functional approach used by the German Army as a framework to analyze and address the problem of trench warfare heavily influenced the *Sturmataillon*'s force structure. In addition, the necessity to attain and achieve a high tempo, "dislocating"²⁴⁶ the adversarial force and keeping pressure in the offensive, pushed assault organizations to the adoption of the squad as the basic level of employment. This requirement also had significant consequences in terms of command and control processes, as well as leadership considerations. Throughout the war, the two above-mentioned factors, together with the pragmatism typical of the German tradition, held a decisive role in defining the weapons and equipment of the *Sturmataillone*.

The Weapons and Equipment of the *Stosstrupps*

The functional approach of German doctrine led to the establishment of assault battalions as combined arms formations. Their structure attempted to maximize the firepower and the assault power of the infantry, by concentrating each in a separate capacity: the *Truppwaffen* and the *Sturmkompanien*.²⁴⁷ The first had the task to enable an attack by suppressing or destroying enemy emplacements with speed and precision during the break-in and the breakthrough of the adversarial defensive system. Moreover, it resulted critical in dispatching unexpected threats and protecting the flanks of the

²⁴⁶ Samuels, *Doctrine and Dogma*, 84.

²⁴⁷ *Ibid.*, 41.

advancing formations..²⁴⁸ The assault element was trained and equipped to assault and seize the enemy trenches and to overwhelm the enemy positions in depth..²⁴⁹

The combination of weapons and equipment assigned to each component of the *Sturmabteilung* was designed to guarantee the maximization of the specific type of power (either firepower or fighting power) proper of the component itself. Therefore, it is significant to conduct a quick review of the *Stosstruppen*' main weapon systems and gear, in order to properly facilitate the analysis of their training and their tactics later on in the chapter.

The main weapon systems of the *Truppwaffen* were the field gun or infantry gun, the light trench mortar, the machine gun, and the grenade launcher (also called grenade firer or *Granatenwerfer*). The first category included the 37-millimeter Krupp *Sturmkanone*, quickly discarded after the first experiments with the adoption of a modified 76.2-millimeter captured Putilov Russian gun. Later in the war, the Krupp *Feldkanone* '96 ('96/16') replaced the Russian cannon..²⁵⁰ *Sturmabteilung* Rohr, instead,

²⁴⁸ Historian Martin Samuels identifies three specific phases in trench warfare: the break-in, the breakthrough and the break-out. The break-in included the engagement of the forward section of the enemy defensive system, the crossing of no man's land and the "dislocation" of the adversary. The breakthrough envisaged the disruption and degradation of the enemy defensive system, through the application of speed and violence of action. The break-out involved further efforts to keep the pressure on the enemy system, building up momentum and preventing the sealing of the penetration. Samuels, *Command or Control?*, 86-87, 90.

²⁴⁹ Samuels, *Doctrine and Dogma*, 53.

²⁵⁰ The Putilov Russian field gun had an effective range that varied from 4,600 meters (5,000 yards) to 7,000 meters (7,650 yards), depending on the specific model and the type of ammunition. The modifications carried out by the German Army, supposedly with the support of the Krupp company, were aimed at lightening the system and improving its mobility. The barrels were shortened, the carriage was stripped of all the unnecessary parts, whereas the shield protecting the operators was maintained. Since the

continued to employ the Ehrhardt 75-millimeter light mountain howitzer in this role.²⁵¹

These weapon systems allowed the attackers to suppress or destroy enemy field guns and machine guns positioned immediately behind the forward defensive line, a key component of the adversarial defensive system. Moreover, this kind of direct-fire weapon was very effective in neutralizing unexpected enemy machine gun emplacements or concrete pillboxes after the break-in with a degree of responsiveness and precision that was not attainable with traditional fire support.²⁵²

However, this weapon system also presented some shortfalls. First, the direct-fire techniques, together with the size of the weapon, limited the possibilities to camouflage it. This often invited the response of enemy counter-fire. Second, it presented a limited degree of mobility. Third, it required a crew of eight men to be operated, and a caisson to transport its ammunition. For these reasons, the field gun was usually very effective in

requirements connected to the infantry gun did not include the capability to engage targets at distances higher than 1,000 meters, the long-range sights were removed too. Samuels, *Doctrine and Dogma*, 41. See also Samuels, *Command or Control?*, 90; Gudmundsson, *Stormtroop Tactics*, 48-49, 80; Ricardo R. Cardona, *Sturmtruppen: World War I German Stormtroopers* (Madrid, Spain: Andrea Press, 2014), 43. For the technical data of the gun see U.S. Army War College, *German and Austrian Tactical Studies*, 168.

²⁵¹ The *Feldkannone* had a maximum effective range of 10,500 meters (11,000 yards). It was a very precise and effective weapon both at short and long range. It fired two types of ammunition: the first, with a contact fuse, was useful to observe and control fire, whereas the second, with a delayed fuse, was very effective in the conduct of fire-for-effect missions. Samuels, *Doctrine and Dogma*, 19. See also Samuels, *Command or Control?*, 90; Gudmundsson, *Stormtroop Tactics*, 77.

²⁵² Samuels, *Doctrine and Dogma*, 41-42. See also Samuels, *Command or Control?*, 91; Gudmundsson, *Stormtroop Tactics*, 48-49.

attacks with limited objectives, but it was difficult to employ when a penetration in depth was required, considering the difficulty of keeping up with the advancing troops.²⁵³

The 76-millimeter light trench mortar constituted the second category of *Truppwaffen*. Its points of strength were its maneuverability, the fragmentation effect produced by its ammunition, and the use of the high trajectory (the mortar is an indirect-fire weapon only). In respect to the last, the advantage provided by this system was the possibility of engaging the enemy's front line, which was challenging to suppress with external fire support because of the close proximity with the advancing friendly troops. The high arch of the round trajectory made this weapon also very effective in neutralizing enemy personnel protected inside the trenches because the mortar shells tended to fall almost vertically out of the sky. As the only disadvantage, this weapon required extensive training to be mastered, compared to other types of fire support systems.²⁵⁴

The third category of *Truppwaffen* consisted of the grenade launcher. It was a two-piece modular system that could fire both in direct and indirect-fire mode. Operated by a crew of four, it was the ideal infantry support weapon, because it could easily accompany the assault elements. Moreover, the limited weight of its ammunition guaranteed increased autonomy in terms of basic load of rounds transported by the operators. Finally, its accuracy and high rate of fire, combined with the possibility of exploiting both a low and high trajectory, conferred to this system a great degree of

²⁵³ Samuels, *Doctrine and Dogma*, 42.

²⁵⁴ The trench mortar, or *Minenwerfer*, had a maximum effective range of 1,312 meters (1,466 yards). Samuels, *Doctrine and Dogma*, 42-43.

flexibility, essential to cope with opportunity targets during the breakthrough.²⁵⁵ This kind of weapon was not assigned to a specific detachment or section but instead attached to the assault companies.

The final category of *Truppwaffen* included the machine gun. At the beginning of the war, the German Army relied exclusively on the 7.92-millimeter *Maschinengewehr* '08 model, a variant of the Maxim gun. Although this weapon had an effective range of 4,000 meters (4,380 yards) and a high rate of fire, it lacked maneuverability because of its weight. This, in turn, affected the possibility of providing close support to the advancing infantry. For this reason, the German Army engineered a lighter model, the *Maschinengewehr* '08/'15, which was slightly less cumbersome and heavy, while retaining the most important characteristics of the previous version.

However, the new model did not suffice to meet the mobility requirements needed for the infantry during the breakthrough. For this reason, the German Army also commissioned a light machine gun model, the 7.93-millimeter Bergmann gun, a belt-fed weapon sighted up to 400 meters (440 yards), which was fielded in 1916. It was also common for the assault troopers to use captured Lewis guns. This was a US-made light machine gun model, lighter and more reliable than the German counterpart.²⁵⁶

²⁵⁵ Two models of grenade launcher, also called grenade firer, were used during the war by the German Army, the *Granatenwerfer* '15 and '16. Both had a weight of about 48 kilograms (105 pounds). Mortar ammunition was very effective against unprotected targets because of their fragmentation effect. This weapon had a maximum range of about 300 meters (330 yards). Samuels, *Doctrine and Dogma*, 43.

²⁵⁶ The *Maschinengewehr* '08 weighted a total of 57 kilograms (126 pounds), split between the weapon proper (22 kilograms–48 pounds) and its tripod (35 kilograms–77 pounds). When used in assault mode it weighted 25 kilograms (55 pounds). Its theoretical rate of fire was 500 rounds per minute, while the average one was 300 rounds per minute. The *Maschinengewehr* '08/'15 weighted 22 kilograms (48.5 pounds). The Bergmann gun

The men of the *Sturmbataillone* tended to employ the four types of *Truppwaffen* in pairs of “mutually complementary” weapons. More precisely, the field gun was routinely employed in combination with the trench mortar to provide a considerable amount of firepower, with precision and speed, especially during the break-in. However, the lack of mobility of these two weapon systems restricted the possibility of accompanying the infantry during the breakthrough. This task was rather assigned to machine guns and grenade launchers that were able to support the assaulters with flexible and responsive fire working in pairs.²⁵⁷

Whereas the fire support elements of a *Sturmbataillone* employed suitable weapons to generate the maximum extent of firepower, the assault companies were equipped for close combat. The environment of the trenches called for a specific array of weapons and tools that differed significantly from the ones typical of the conventional infantry formations. This included hand grenades, pistols, carbines, the first prototypes of submachine guns, flamethrowers, and daggers. In the German doctrine, all these weapons were called *Nahkampfmittel* or close combat weapons.²⁵⁸

weighted 11 kilograms (25 pounds). It was air-cooled and had the same rate of fire of the '08 Model, although it was prone to the overheating of the barrel. The light machine guns were not assigned to the machine gun companies, but rather to the assault companies (four weapons each). The Lewis gun was a .303-inch air-cooled weapon, with an effective range of 600 meters (650 yards) and a rate of fire of 600 rounds-per-minute. Samuels, *Doctrine and Dogma*, 44. See also Samuels, *Command or Control?*, 91; Gudmundsson, *Stormtroop Tactics*, 98-100; Cardona, *Sturmtruppen*, 49. For the technical data of the various models of machine gun see Michael Duffy, “Encyclopedia: Bergmann MG15 nA gun,” *firstworldwar.com*, August 22, 2009, accessed January 28, 2020, https://www.firstworldwar.com/atoz/mgun_mg15na.htm.

²⁵⁷ Samuels, *Doctrine and Dogma*, 44-45.

²⁵⁸ *Ibid.*, 46.

Grenades were the primary means of trench warfare and were extensively used to clear the enemy trenches with the rolling-up technique. The *Stosstrupps* employed primarily two main types of grenade: the stick grenades (*Stielehandgranate*), offensive devices available with contact and time fuses, and the egg grenade (*Eierhandgranate*), used mainly for defensive purposes, given the wider lethal radius they possessed.²⁵⁹

Pistols and revolvers were very popular among the storm troopers because they were easily manageable in the confined spaces of a trench. Handguns were also easy to transport and to shield from the mud and the weather, and more reliable during an assault. However, this kind of firearm needed a frequent change of magazine or drum. For this reason, and in light of the unsuitability of the rifle in the conduct of trench warfare, the German assault units adopted the 7.92-millimeter carbine *Gewehr* '84/'98, a shorter variant of the Mauser rifle originally designed for pioneers and cavalry units. The research for a lighter and more compact weapon, capable of discharging a high number of rounds in a relatively short time, led the *Sturmbataillone* to acquire the Bergmann 9-millimeter 32-round *Maschinenpistole* '18, one of the very first models of submachine gun.²⁶⁰

Whereas the flamethrowers are often considered support weapons, the German doctrine categorized them as an essential weapon for close combat. First issued to the

²⁵⁹ The stick grenades produced a significant blast effect with limited fragmentation and were designed to stun the enemy, so allowing the assaulter to close the distance and finish his opponent. Samuels, *Doctrine and Dogma*, 46-47. See also Bull, *Stosstrupptaktik*, chap. 3.

²⁶⁰ Samuels, *Doctrine and Dogma*, 48-49. See also Gudmundsson, *Stormtroop Tactics*, 51; Bull, *Stosstrupptaktik*, chap. 7.

army in 1912, the portable flamethrower system received gradual improvements during the war. Operated by a crew of two men, it could project flames up to 20 meters. A flammable mixture was ignited and projected on the enemy, with the additional dispersion of clouds of black smoke that was useful to create a screen that concealed the assaulter. The main purpose of this weapon was to affect the enemy morale, but it also proved very useful to clear pillboxes and cellars of buildings.²⁶¹ Finally, the abandonment of the rifle with the concurring necessity to dispose of an edged weapon for hand-to-hand fighting led the storm troopers to replace the bayonet, the number one symbol of the infantryman, with daggers and knives.²⁶²

Having completed the review of the weapons employed by the *Sturmabteilung*, it is now appropriate to take a quick look at their essential equipment. In line with the pragmatism typical of the German military culture, individual gear of the assaulters was modified to meet the requirements dictated by their method of fighting.²⁶³ For example, when Rohr assumed command of the Assault Detachment in September 1915, he had his men equipped with uniforms reinforced on the knees and elbows to facilitate crawling in combat. Moreover, half-boots and puttees of the kind used by the Austrian mountain troops replaced the heavy leather boots typical of the infantry. The leather belt and

²⁶¹ Samuels, *Doctrine and Dogma*, 47-48. See also Gudmundsson, *Stormtroop Tactics*, 44-45, 65; Bull, *Stosstrupptaktik*, chap. 3.

²⁶² Samuels, *Doctrine and Dogma*, 48-49. See also Bull, *Stosstrupptaktik*, chap. 7.

²⁶³ Gudmundsson, *Stormtroop Tactics*, 51.

shoulder harness that was standard-issue for the German Army was traded for shoulder-bags that allowed the assaulter to bring more hand grenades into battle.²⁶⁴

A second example of the flexibility and adaptability of the assault units in terms of equipment can be made analyzing the typical load-out for an operation. Every man carried a steel helmet, eight stick grenades, 10 egg grenades, wire cutters, spade or shovel, 100 rounds for the primary weapon, two canteens, and a dagger. The assaulters did not routinely use any pack to remain lighter and more agile.²⁶⁵

In addition, a *Stosstrupp* tended to differentiate the weapons load of its two fire teams. More precisely, with reference to an assault squad composed of eight men and one NCO, the first fire team, with two grenade throwers and two carriers, usually was armed with carbine or rifle, pistol, and dagger. The men of the second fire team, instead, carried a carbine and 25 sandbags, useful to create hasty defensive barriers and reinforce a seized position, if needed.²⁶⁶ Therefore, it is immediately evident the use of a functional logic to divide and assign the specific materials needed for an assault. Although these particulars could pass for trifles, they are indeed indicative of the meticulous mindset of the men of

²⁶⁴ Gudmundsson, *Stormtroop Tactics*, 51.

²⁶⁵ U.S. War Department, *Tactical Studies No. 1*, 19. See also Cardona, *Sturmtruppen*, 171.

²⁶⁶ The specific example made concerning the typical squad's load-out was referred to an assault squad of the 180th Infantry Regiment of the German Army, not to a *Sturmabteilung*. However, Bull specifies that the unit in question had just completed a course on assault tactics, held in 1916. Therefore, it is safe to assume that the squads of the *Sturmabteilung* used the same procedure, at least in 1916, because the instructional courses were held by the members of the assault units, as already mentioned previously. Bull, *Stosstrupptaktik*, chap. 3.

the *Sturmtrupps*. The special attire donned by the *Stosstruppen* was later to become a symbol of their elite status.

In summary, the approach held by the *Sturm bataillone* in solving the tactical dilemma of trench warfare envisaged the adoption of a wide variety of different weapon systems distributed to specific elements inside the battalion force structure. The fire support elements relied primarily on *Truppwaffen* to maximize the firepower of the unit. In turn, the weaponry of assault elements consisted mainly of *Nahkampfmittel* (close combat weapons), which enabled the attainment of the maximum level of assault power possible.

Indirect-fire artillery still played its part in support of the battalion's offensive maneuver, mainly in terms of suppression. The combination of such a variety of weapons and different sub-units created two main requirements: the necessity for every soldier to attain a high level of proficiency in the use of different systems, and the requisite for the seamless integration and synchronization of all the players to achieve the desired effects on the battlefield. How were the *Stosstrupps* able to address these requirements? The answer to this question lies in the selection and training of their personnel.

The Selection and Training of the *Sturmtrupps*

This section of Chapter Three will illustrate the selection and training of the men of the *Sturm bataillone*, with a final description of the peculiar creed developed by the members of these elite formations. When the OHL established the first assault detachment in March 1915, it did not enact any form of selection of the personnel needed to fill the ranks of the new formation. On the contrary, the Army High Command employed replacement (*Ersatz*) units for this purpose. Major Kalsow, the first

commander, was the only member of the unit handpicked for that specific task, considering his previous experience as a combat engineer officer.²⁶⁷ This fact is meaningful because it implies that the initial concept of the OHL regarding the Assault Detachment emphasized the experimental and instructional nature of it, leaving out any aspiration to raise an elite formation.

The assignment of Captain Rohr in September of 1915 defined a turning point in the history of the unit. Rohr adopted a radically different and innovative approach, drawing from his previous experiences, especially those matured during his service in the Guard Rifle Battalion. He not only understood the importance of the experimental and instructional role of his unit, but he also developed a system of battle tactics that prized aggressiveness, impetus, initiative, and courageousness, typical of the elite *Jäger* formations. This approach set the stage for a transformation “from an experimental pioneer unit to an elite infantry organization.”²⁶⁸ During the period between September and November 1915, the detachment underwent an intense cycle of training and tests, creating the conditions for the first successes on the battlefield at the end of the same year. It is safe to assume that the “magic” ingredient underpinning Rohr’s achievements was not related to a weapon, the assault cannon and later the infantry gun, but rather lay in the tactics and the men executing them.

When the Assault Detachment was expanded in May 1916, the necessity to recruit high-quality human material became clear. As already offered, the *Sturmabteilung*, being

²⁶⁷ Samuels, *Doctrine and Dogma*, 14.

²⁶⁸ Gudmundsson, *Stormtroop Tactics*, 47. See also Samuels, *Doctrine and Dogma*, 17-19.

a provisional unit, had to draft its personnel from other units or other units' depots. This mechanism, however, implied that the other units provided low-quality personnel, in the attempt to retain their best human resources. The process of creating an effective and cohesive formation with this kind of material took plenty of effort and time on Captain Rohr's part in the first place.²⁶⁹ It is why in thinking to expand the capacity of the assault units, the *Jäger* battalions were selected, among other reasons.²⁷⁰ After all, the *Jäger* were elite permanent formations, with their own depots. What could go wrong? During the initial training pipeline for the conversion of the 3rd *Jäger* Battalion, supervised by Rohr and held in the village of Beauville, 500 officers, NCOs, and soldiers had to be transferred from the *Jäger* unit, because they were unable to meet the required standards. They were later replaced by young recruits, who could more easily withstand the rigors of Rohr's training program.²⁷¹

The sources consulted in the research for this thesis present no reference to a starting point regarding the enactment of a selection of personnel. However, it is safe to assume that this process began after the conversion of the 3rd *Jäger* Battalion, mainly to mitigate the issues inherent in the acquisition of new personnel for *Sturmabteilung* Rohr. The screening criteria adopted by the assault battalions reinforce this point. The

²⁶⁹ Gudmundsson, *Stormtroop Tactics*, 79.

²⁷⁰ Other factors that brought to the selection of the *Jäger* were the fact that they were "free-standing formations," so limiting the impact of this choice on existing regiments and divisions, and their force structure, that already included a machine gun company. Gudmundsson, *Stormtroop Tactics*, 78.

²⁷¹ The *curriculum* administered during the conversion training of the *Jäger* battalions was almost identical to that used by Rohr to prepare his men. Gudmundsson, *Stormtroop Tactics*, 79.

applicants could come from all the branches of the army, they had to be volunteers, under the age of 25 years old, single, and with some sports background.²⁷² These requisites, first of all the willingness to apply, provided mitigation to the unpleasant practice of the other units to use the *Sturmabteilung* as a “dumping ground,”²⁷³ but also guaranteed an initial batch of high-quality human material to work on.

When Ludendorff ordered the creation of one assault battalion for each army on the Western Front, the benefits of this selection process probably favored also the new outfits in their activation process, even if some of those were formed by merging existing unofficial assault detachments.²⁷⁴ After the establishment of the new *Sturmabteilung*, without a doubt, the presence of screening criteria was instrumental in maintaining high standards in the assault formations.²⁷⁵ It is highly plausible, albeit no specific evidence exists, that the selection process continued through the recruits’ initial qualification cycle.

In the German Army, training was a very important business, conducted with such intensity that “the German soldier received more training in two years than a British regular in four.”²⁷⁶ This particular focus was tied to the philosophical concept rooted in the German military institutions that the quality of a unit was a direct consequence of its

²⁷² Samuels, *Doctrine and Dogma*, 29. See also Balck, *Development of Tactics—World War*, 86.

²⁷³ Gudmundsson, *Stormtroop Tactics*, 79.

²⁷⁴ Gudmundsson, *Stormtroop Tactics*, 84. See also Samuels, *Doctrine and Dogma*, 29.

²⁷⁵ Gudmundsson, *Stormtroop Tactics*, 152.

²⁷⁶ Samuels, *Doctrine and Dogma*, 99. See also Bull, *Stosstrupptaktik*, chap. 1.

level of training.²⁷⁷ The *Sturmabteilung* inherited this approach to training, bringing it to the next level.

Training constituted an essential element in the standard routine of a storm trooper. Since the men of the assault battalions were exempted from guard and trench duties, they were usually refining their skills when not busy with operational activities.²⁷⁸ The training program introduced by Captain Rohr presented some significant differences from the standard *curricula* of the German infantry.²⁷⁹ It focused on three main points: physical fitness, specialty-related drills, and integration with supporting weapons, including artillery.²⁸⁰ In regard to the first category, the men of the assault battalions dedicated almost half of the training day to practice sports activities. Part of those was of civilian nature, such as running, gymnastics, and soccer. The rest included technical fitness exercises devised to improve battlefield-oriented skills, such as the obstacles course and grenade throwing.²⁸¹

The second category included different types of activities aimed at maintaining and increasing the skills of the soldiers of each company, in line with their specialization. The assaulters used to conduct marksmanship, grenade throwing, obstacles breaching and crossing, reconnaissance, movement and assault techniques. Battle drills constituted a

²⁷⁷ Samuels, *Doctrine and Dogma*, 98.

²⁷⁸ Gudmundsson, *Stormtroop Tactics*, 87.

²⁷⁹ *Ibid.*

²⁸⁰ Morisi, *Hell in the Trenches*, 16, Kindle.

²⁸¹ Gudmundsson, *Stormtroop Tactics*, 87.

pillar of the *Sturmtrupps* training, covering various types of situations in the offense and in the defense, such as trench and bunker clearing, counter-attacks, and the repulse of enemy assaults.²⁸² Although there are scarce details regarding the specific training of the weapon companies of the battalion, it is likely that this was focused on gunnery, crew drills, assembling and disassembling of weapon systems, and displacement drills. Upon the appearance of the first tanks on the battlefield in 1916 during the battle of the Somme, the programs were integrated with anti-tank drills, including the use of grenades and anti-tank guns.²⁸³

Finally, the third category of training activities aimed at developing the synergy and integration of all the subunits of the *Sturmbataillon*, through the execution of live-fire field exercises and full-dress rehearsals on full-scale mock-ups of enemy positions, including obstacles and trenches. In addition, the storm troopers routinely conducted live-fire training sessions with non-organic artillery units, to get accustomed to closely following a creeping barrage. The purpose of these drills was to instill confidence in the troopers, allowing them to maximize the suppressive effects of the barrage, assaulting the enemy positions as soon as the bombardment ended.²⁸⁴

Overall, the *Stosstrupps* training during the Great War aimed at developing individual and collective skills, with a high emphasis on the integration of the assaulters

²⁸² Gudmundsson, *Stormtroop Tactics*, 87. See also Samuels, *Command or Control?*, 239-240; U.S. War Department, *Tactical Studies No. 1*, 18-19.

²⁸³ Bull, *Stosstrupptaktik*, chap. 7.

²⁸⁴ Gudmundsson, *Stormtroop Tactics*, 87, 113. See also Lupfer, *The Dynamics of Doctrine*, 28.

with all the supporting weapons. Moreover, it was characterized by high-performance standards and marked realism, to such an extent that casualties during live-fire exercises were not unusual, even if safety measures were put in place.²⁸⁵ This type of training was key in nurturing not only self-confidence, competence, and initiative in the storm trooper, but also mutual trust and shared understanding between soldiers and leaders, greatly contributing to the decentralization of command at the squad level.²⁸⁶

These practices, together with the specialized and dangerous nature of the tasks assigned to the *Sturmtruppen*, gradually shaped the way these soldiers saw themselves and were looked upon by the members of regular units. On the one hand, Ernst Jünger, who served in the German 73rd Infantry Regiment (Gibraltar) as an officer and *Stosstrupp* leader during World War I, described the storm troopers as “that handful of resolute men, who fight like a machine, each performing his own task, with the object of making a breach for the troops behind.”²⁸⁷ These words are particularly meaningful in the way they portray the perception of the men of the assault units through the eyes of one of their leaders. On the other hand, the words of the German medical officer Stefan Westmann clearly define the way these soldiers were regarded by the rest of the Army:

The men of the storm battalions were treated like football stars. They lived in comfortable quarters, they travelled to the “playing ground” in buses, they did their jobs and disappeared again, and left the poor foot sloggers to dig in, to deal with the counter-attacks and endure the avenging artillery fire of the enemy. They were so well trained and had developed such a high standard of teamwork. . .

²⁸⁵ An example of these measures is the use of grenades with reduced charges. Gudmundsson, *Stormtroop Tactics*, 87. See also Jünger, *Storm of Steel*, 184, 221.

²⁸⁶ Samuels, *Command or Control?*, 93.

²⁸⁷ Ernst Jünger, *Copse 125: A Chronicle from the Trench Warfare of 1918*, trans. Basil Creighton (New York, NY: Howard Fertig, Inc., 2003), 104.

They moved like snakes over the ground, camouflaged and making use of every bit of cover, so that they did not offer any targets for artillery fire.²⁸⁸

In this regard, Gudmundsson maintains that the soldiers of the *Sturmabteilung* developed a separate culture, “a spirit that was at odds with that of the line infantry.”²⁸⁹ In a conflict that tended to alienate the soldiers, oppressed by the harsh reality of the trenches and decimated by an enemy without face, the storm trooper became a romantic figure, like pilots or U-boat sailors. His aggressiveness and determination allowed him to soar over the misery afflicting the ordinary soldiers, to valiantly bring the fight against the enemy.²⁹⁰ Again, the words of Jünger reinforce this idealized conception of the *Sturmtruppe*:

The hardest sons of the war, the men who lead the storm-troop, and manipulate the tank, the aeroplane, and the submarine, are preeminent in technical accomplishment; and it is these picked examples of dare-devil courage that represent the modern state in battle. These men of first-rate qualities with real blood in their veins, courageous, intelligent, accustomed to serve the machine, and yet its superior at the same time, are the men, too, who show up best in the trench and among the shell-holes. There is one circumstance, certainly, that has a stimulating influence and makes the courage that faces explosives a courage of its own. There are things that cannot be avoided and must be gone through, like an operation, an unpleasant talk, or a fight hand to hand. Under shell fire, on the other hand, one can rely entirely on one's luck and get through, perhaps, without even a scratch. You fling yourself into it with the same impulse as when you stake your all on a card—provided you have the temperament. This brings in the element of sport and gambling, two things that are very closely allied.²⁹¹

²⁸⁸ Bull, *Stosstrupptaktik*, chap. 5.

²⁸⁹ Gudmundsson, *Stormtroop Tactics*, 81.

²⁹⁰ *Ibid.*, 82.

²⁹¹ Jünger, *Copse 125*, 48-49.

It is a fact that the high level of support and the privileged treatment granted by the OHL to the *Stosstrupps* resulted critical not only in the development of the assault units proper but also in nurturing and spreading this idealized conception of the men of the assault battalions. After all, *Sturmbataillon* Rohr was known to be Crown Prince Wilhelm's favorite unit, and General Ludendorff publicly described these men as the model for the German Army.²⁹² The reason for the approach of the OHL in this matter is twofold. First, the creation of a mythical aura surrounding the *Stosstrupps* represented a magnificent opportunity for propaganda, "a power to raise uncertainty in the hearts of the enemy and give a fillip to those fighting by their sides."²⁹³ The reports of successful results of military operations, especially raids, were routinely included in frontline newspapers and further disseminated among the various units which rotated through the trenches.²⁹⁴

Second, the official backing to the creed of the storm troops served the very pragmatic function to attract the soldiers that displayed a natural lust for battle in official and unofficial outfits, particularly suited to execute the most difficult and delicate tasks. This also represented an attempt to mitigate the "live and that live" attitude that in World War I was very common in all the armies, and that was viewed as utterly counter-productive and mutinous by the highest elements of the chain of command. In this regard,

²⁹² Gudmundsson, *Stormtroop Tactics*, 82, 83-84.

²⁹³ Bull, *Stosstrupptaktik*, chap. 5.

²⁹⁴ To further reinforce this point, among the periodicals available to soldiers, there was one titled *Der Stosstrupp*, with a section called "*Stosstrupgeist*" (Storm Trooper Spirit). Gudmundsson, *Stormtroop Tactics*, 83.

the *Sturmtruppen* represented a very convenient tool to conduct raids in the enemy defensive positions. In fact, as “imported” units, not assigned to any specific sector of the front line, the storm units could fight without pity for their victims and no fear of retaliation after the action. They usually arrived at a specific spot to do business, executed orders, and were back to the safety of their comfortable quarters before the enemy could enact any form of reprisal.²⁹⁵

The fact that the men of *Sturmabteilung* underwent a selection, an intensive and rigorous training program, and developed a distinctive military sub-culture, together with the last *excursus* about raids, could lead the reader to an involuntary association with modern special forces units. The resemblance is uncanny. However, it is critical to remember that the combat role of these outfits was always subordinated to their instructional capacity.

At least at the beginning, the participation of the Assault Detachment in combat was merely an opportunity to test the newly devised TTPs. The successful results of the first operations tempted the German commanders to sway from the initial intent. The employment of *Sturmabteilung* in the Verdun campaign was a clear example of that. However, it was also instrumental in underscoring the difficulties in maintaining the unit committed both to combat operations and instructional courses with the strength

²⁹⁵ Gudmundsson, *Stormtroop Tactics*, 83. To better clarify this concept, during the Great War, with specific reference to trench fighting, soldiers on both sides were prone to become more worried about their own comfort and safety, than of the actual accomplishment of the assigned tasks, especially of killing the enemy. Moreover, when the soldiers on the front line conducted raids or bombardments with their own organic mortars, usually a retaliatory artillery barrage used to follow. For this reason, the ordinary infantrymen tended to be less motivated to the execution of these particular types of offensive actions. See Jünger, *Storm of Steel*, 55-58, 65-66.

authorized at the time. The solution to this issue came in the guise of the OHL's decision to expand this capability. This measure underlines not only the General Staff's intention of exploiting without delay the advantages that the *Stosstrupptaktik* granted in combat, but also the determination to stick to the initial objective, setting the condition for the successful transmission of the new TTPs to all the infantry units of the Imperial German Army.

Stosstrupptaktik

The final part of this chapter reviews the analysis of the specific tactics used by the *Sturmabteilung* during the Great War. Initially devised by Captain Rohr in 1915 and further refined during the following two years, these became officially part of the German Army doctrine in 1917, with the promulgation of the *Principles of Command in the Defensive Battles in Position Warfare* and in 1918 with the publication of the *Attack in Position Warfare*.²⁹⁶ These two military publications were instrumental in standardizing the TTPs *de facto* already in use in the ranks of the Imperial German Army. This step also represented that top-down intervention of the General Staff aimed at gathering and integrating the results of the process of "horizontal innovation" that affected the German military institution in the previous two years.²⁹⁷ The new precepts contributed to the German tactical successes of the 1918 offensive campaigns, but, most of all, set the

²⁹⁶ Lupfer, *The Dynamics of Doctrine*, 27, 43, 57.

²⁹⁷ Foley, "A Case Study in Horizontal Military Innovation," 818-819.

fundamentals upon which the German doctrine would be built in the interwar period and in the Second World War.²⁹⁸

To introduce the description of *Stosstrupptaktik*, it is appropriate to touch briefly on the basic principles underpinning German doctrine, and that characterize the German command philosophy. These premises are critical for understanding the assault tactics, which constitutes the focus of this section of Chapter Three.

Both the offensive and the defensive doctrinal sets were built upon five main “tactical concepts”: *Schwerpunkt* (focus of energy), *Aufrollen* (rolling up), *Flachen und Luchen* (areas and gaps), *die Leere des Gefechtfeldes* (empty battlefield) and *Schlagfertigkeit* (immediate responsiveness).²⁹⁹ The first principle called for the concentration of the army resources on a specific element of the enemy system, acknowledging that “he who tries to be strong everywhere, is strong nowhere.”³⁰⁰ The adoption of this approach was a *condition sine qua non* for the German forces, considering their lack of resources in comparison to their adversaries. In the defense, this concept equated to the orientation of the counter-attack efforts either in destroying the enemy or in retaining specific key terrain. In the offense, this idea corresponded to the identification at the various echelons of critical points, indispensable to prioritize the allocation of resources. In both cases, the initial recognition and the subsequent

²⁹⁸ Gudmundsson, *Stormtroop Tactics*, 178.

²⁹⁹ Samuels, *Doctrine and Dogma*, 59, 172.

³⁰⁰ *Ibid.*, 60.

assessment of the *Schwerpunkt* was the responsibility of the commanders at every echelon.³⁰¹

The rolling up was closely related to the first concept and underpinned by the same rationale of the envelopment: strike the enemy wherever it is weakest. In the defense, this equated to let the enemy enter the main battle zone,³⁰² exposing its flanks and rear to the fire or the counter-attack of German concealed positions. In the offense, the *Aufrollen* envisaged the identification and the penetration of the weakest positions of the enemy defensive line, creating a gap that further enabled the attackers to spill through and envelop all the adversarial forces protecting the front line.³⁰³

The idea of areas and gaps was connected to the use of dispersion of their own forces to increase their degree of protection, and at the same time, splintering the efforts of the enemy, draining it from all its resources. On the one hand, in the defense, this concept was obviously translated in exploiting depth and terrain features to array the

³⁰¹ Samuels, *Doctrine and Dogma*, 60-62, 172. The concept of *Schwerpunkt* was a traditional element in the German doctrine. Carl von Clausewitz, in his famous publication, *On War*, defines it as “the hub of all power and movement, on which everything depends. This is the point against which all of our energies should be directed.” Carl von Clausewitz, *On War*, ed. and trans. Michael Howard and Peter Paret (Princeton, NJ: Princeton University Press, 1989), 595-596. *Schwerpunkt* is often referred to as “center of gravity,” especially after the translation by Michael Howard and Peter Paret in the edition of the book reported above. However, I am more in line with Samuels’ definition of “focus of energy,” that better depicts his nature of “centre around which all else is adapted.”

³⁰² The main battle zone was the middle defensive sector of the German scheme for the elastic defense in depth. The analysis in detail of the German defense in depth is not in the scope of the present thesis. Further elements about this kind of defense can be found in Lupfer, *The Dynamics of Doctrine*, chap. 1. See also Wynne, *If Germany Attacks*.

³⁰³ Samuels, *Doctrine and Dogma*, 62-64, 172.

defensive sector, typical of the elastic defense in depth. On the other hand, in the offense, this construct was applied by giving depth to the penetration of the enemy defenses, using the artillery to isolate the target area, splintering the enemy defensive layout with the advance of different infantry squads. This created pockets of enemy resistance that were easily overwhelmed by the follow-on forces.³⁰⁴

The concept of *die Leere des Gefechtfeldes* (empty battlefield) called for the necessity to keep one's own forces concealed from enemy observation as much as possible, while retaining the capability of observing adversarial movements. In the defense, this principle envisaged the use of camouflage for trenches, dugout, pillboxes, and, most of all, heavy weapons and artillery emplacements. The effectiveness of field defenses was linked not only to their positioning and construction but also to the possibility of concealing them. After all, during the preparation of an attack, it was difficult to target a defensive feature that had not been identified in advance, and the factor of surprise would be reversed on the attacker. In the offense, on the other hand, the use of terrain cover by the assaulting element, the employment of smoke devices, flamethrowers, artillery with gas munitions contributed to cover the friendly advance and maintain the enemy's distraction, so favoring the infiltration of the assault squads with speed, surprise, and violence of action.³⁰⁵

Finally, the idea of *Schlagfertigkeit*, or immediate responsiveness, was centered on the requirement to keep the enemy unbalanced, exploiting with quick and ruthless

³⁰⁴ Samuels, *Doctrine and Dogma*, 64-68, 172.

³⁰⁵ *Ibid.*, 68-69, 172.

action every vulnerability or opportunity that the adversary forces presented. In the defense, this notion was represented by the German emphasis on immediate counterstrokes (*Gegenstoss*) or deliberate counter-attacks (*Gegenangriff*),³⁰⁶ going back to von Clausewitz's idea of the defense as "a shield made up of well-directed blows."³⁰⁷ In the offense, the principle of immediate responsiveness defined the importance of exploiting speed, surprise, and shock to keep the adversarial forces paralyzed and unresponsive during the penetration, with particular attention to disrupt any possible countermeasure.³⁰⁸

The pursuit of the "paralysis" of the enemy's defensive system, implied by the last tactical concept, leads directly into the notion of operational tempo, the bedrock of the German command philosophy. Tempo can be characterized as "the actuality of total domination of the 'being' of the enemy; that is, of his physical, mental and spiritual existence."³⁰⁹ This envisaged the application of an unexpected and vigorous shock on the enemy system to create an initial effect of dislocation.³¹⁰ The continuous application of pressure in maintaining the dislocation led to an overload of the adversarial command

³⁰⁶ Samuels, *Doctrine and Dogma*, 69-72, 173.

³⁰⁷ Clausewitz, *On War*, 357.

³⁰⁸ Samuels, *Doctrine and Dogma*, 72, 173.

³⁰⁹ M. Elliot Bateman with S. S. Fitzgibbon and M. Samuels, "Vocabulary: the Second Problem of Military Reform. I: Concepts," *Defense Analysis* 6, no. 3 (1990), 263-275, quoted in Samuels, *Doctrine and Dogma*, 83.

³¹⁰ Dislocation is intended as "displacement and disarrangement of parts causing a disordered state throughout the organism containing those parts." Bateman, Fitzgibbon and Samuels, "Vocabulary," 268.

and control processes, ensuring its defeat. The definition of a proper rhythm and a focus on maintaining the pressure against the enemy organization were key in enacting tempo.³¹¹ In turn, the necessity of creating the desired level of pressure called for the exploitation of any opportunity that presented itself on the battlefield. However, since the German doctrine conceived combat as an “inherently chaotic,”³¹² the only way to take advantage of the “fleeting” opportunities was to rely on “flexibility, independence and initiative” of commanders at the lower levels.³¹³

This rationale was at the base of the German command philosophy, known as *Führung nach Directive* or “Directive Command.”³¹⁴ This system envisaged the designation of a commander’s intent (*Absicht*) that went in pair with the assignment of tasks (*Aufträge*), in a way that left subordinate commanders the possibility of autonomously determining the way they wanted to attain the higher commander’s objectives. Once an operation started, the higher commander had the responsibility to support the actions of his subordinates without interfering with tactical details, unless in the circumstances when lack of understanding or error compromised the achievement of success. In turn, the low-level commanders had the responsibility to apply initiative in

³¹¹ Samuels, *Doctrine and Dogma*, 86-87.

³¹² Samuels, *Command or Control?*, 3.

³¹³ *Ibid.*, 5.

³¹⁴ Another term commonly used to define the German command philosophy is *Auftragstaktik* or “mission-type tactics.” However, this specific definition was introduced in the German doctrine after the Second World War. Samuels, *Doctrine and Dogma*, 88.

pursuit of the overall objectives of the higher commander's intent, even when this meant deviating from the assigned orders.³¹⁵

Although "Directive Command" was first established in the German Army at the beginning of the 19th century, it mainly affected the command and control relationships at the operational level, between army and divisional commanders. However, the challenges of trench warfare, most of all, the necessity to disperse the forces on the ground and the pursuit of opportunities on the battlefield to dislocate the adversary, forced the German military institution to push this concept down the chain of command to the low tactical level.³¹⁶

In this respect, as posited by Samuels, the German Army showed its ability to adapt to the circumstances dictated by the new reality of the battlefield in two particular achievements: the intensification of the philosophy of "Directive Command" and the application of *Stosstrupptaktik*.³¹⁷ In Samuels' words, "A combination of highly flexible small unit tactics, a conceptual approach to combat, decentralised command and an exceptional level of combat skill produced a system of great dynamism and responsiveness."³¹⁸ Having already outlined the German doctrinal approach to combat,

³¹⁵ Samuels, *Doctrine and Dogma*, 89.

³¹⁶ The German Army trace the first appearance of the concept of "Directive Command" back to the Hessian mercenaries that fought with the British in the American War of Independence. However, the Prussian military organization officially adopted this notion with the publication of the *Exerzier-Reglement (Exercise Regulation)* of 1806. Samuels, *Doctrine and Dogma*, 90-92.

³¹⁷ Samuels, *Doctrine and Dogma* 180.

³¹⁸ *Ibid.*, 175.

the essence of their decentralized command system and the peculiar training methodology that allowed the assault units to reach a significant level of proficiency, it is now possible to complete the picture with the analysis of the small unit tactics adopted by the *Sturmabteilung*.

The assault battalions were tasked with taking part in combat operations primarily to spearhead conventional formations in difficult large-scale penetration attacks or attacks with limited objectives.³¹⁹ Trench raids represented another common assignment, which was a useful testing ground to refine and improve their TTPs.³²⁰ In other words, their focus was mainly on offensive operations, but it is essential to underscore that these tactics were also embedded in the elastic defense in depth. These procedures included the conduct of immediate counter-attacks by elements of different size that gradually increased from squad level in the outpost or forward battle zone to the company and battalion level in the main battle zone of a defensive sector.³²¹ In addition, *Stosstrupps* were, in some cases, employed directly from the division or army commanders for the execution of special tasks, such as reconnaissance or even liaison.³²²

³¹⁹ Gudmundsson, *Stormtroop Tactics*, 84. See also Balck, *Development of Tactics—World War*, 85; Samuels, *Command or Control?*, 242.

³²⁰ Gudmundsson, *Stormtroop Tactics*, 84. See also Bull, *Stosstrupptaktik*, chap. 5.

³²¹ Lupfer, *The Dynamics of Doctrine*, 27. See also Samuels, *Doctrine and Dogma*, 75-77; Balck, *Development of Tactics—World War*, 87-88.

³²² As offered by Samuels, during the German counter-offensive of May 1918, the German Seventh Army employed *Sturmabteilung 7* to infiltrate patrols behind the lead German attacking elements with the purpose of gathering information and increase the situational awareness of the army headquarters. Samuels, *Doctrine and Dogma*, 96.

The proposed analysis of small unit tactics will focus in detail on the main combat mission of the *Sturmabteilung* in large-scale attacks. Furthermore, the specific differences related to attacks with limited objectives and raids will be highlighted by exception. The concept of elastic defense in depth will not be touched since it is not in the scope of the present thesis.

The planning and the preparation of an attack usually started with the assignment of an element of *Stosstrupps* to a supported infantry division.³²³ The commander of the assault element coordinated with the leadership of the unit in charge, conducted a thorough reconnaissance of the target area, and led the execution of rehearsals.³²⁴ Planning before the action was critical, taking into account all the available intelligence, including aerial imagery products,³²⁵ to understand the enemy composition, disposition, and strength, to orient the fire support efforts, and to define the target weak-spots and the *Schwerpunkts*.³²⁶ The preparation phase included full-dress rehearsals (sometimes with live ammunition) on full mock-ups of the enemy trenches. The emphasis placed on these kinds of rehearsals indicates the importance for each member down at the squad level to know his role in the overall plan. According to Gudmundsson, this procedure introduced

³²³ The infantry division conducting the attack would usually assemble its own unofficial or provisional *Sturmtrupp*, to reinforce the ranks of the element of the *Sturmabteilung*. Samuels, *Doctrine and Dogma*, 51. In the German offensive doctrine, the minimum echelon of employment for large scale attacks was the division. Lupfer, *The Dynamics of Doctrine*, 43.

³²⁴ Samuels, *Command or Control?*, 242.

³²⁵ Morisi, *Hell in the Trenches*, 57.

³²⁶ Morisi, *Hell in the Trenches*, 57. See also Samuels, *Doctrine and Dogma*, 62.

the assault units to “a form of wargaming,” a practice that was previously employed only by the German officers of the General Staff to assess operational plans. The conduct of such an extensive preparation highlights the critical function retained by the assault squad, an entity expected to operate independently on the battlefield, exercising initiative and adapting to the circumstances.³²⁷

The integration with artillery was key for the conduct of the attack. In fact, fire support elements were tasked with suppressing the enemy defenses and disrupting the enemy command and control system and the enemy employment of the reserves, to facilitate the assault of the *Stosstrupps*. A key feature in the evolution of the artillery that is worth mentioning in addressing *Stosstrupptaktik* implied the shift of the focus of fires from destroying the enemy to suppressing and disrupting the adversarial system. In this way, fire support could significantly contribute with firepower to the overall shock of the attack.³²⁸

The first step of the execution phase consisted of a centrally-controlled, synchronized, short, and intense artillery barrage to shape the operational environment. These preparatory fires aimed at suppressing infantry and artillery positions, destroying obstacles, neutralizing headquarters and field telephone stations, and isolating the target

³²⁷ Gudmundsson, *Stormtroop Tactics*, 50.

³²⁸ Lupfer, *The Dynamics of Doctrine*, 44-45. Traditionally, the evolution of the German artillery during World War I is associated with the figure of Colonel Georg Bruchmüller, an artillery officer that excelled in the application of this new approach in the use of fires on the Eastern Front. However, it is important to underscore that the first experiments with artillery in this different role trace back to battle of Vregny Plateau, near Soissons, in France, in January 1915. Gudmundsson, *Stormtroop Tactics*, 30-32.

area to prevent the arrival of reserves.³²⁹ The fire plan was prepared by the artillery officer of the conventional formation leading the operation and included the assignment of specific tasks with precise timetables for each different type of battery, in order to maximize the desired effects of fire in line with the characteristics of each different weapon system.³³⁰

The use of gas shells was common, with the intent to demoralize and disrupt the enemy units in defense. The fires were controlled by artillery observers emplaced in the German forward trenches.³³¹ In the meantime, the assault elements converged on the designated assembling areas near the front line, taking advantage of the distraction offered by the artillery bombardment to retain the effect of surprise.

At the end of the preparatory barrage, the attack formations moved forward to engage the designated portion of the adversarial front line of trenches, crossing no man's land. The timing for the beginning of this step was usually devised to allow the seizure of enemy front trenches before dark, to minimize the possibility for the enemy to direct fires on the assaulting troops, while they consolidated their foothold in the enemy's defensive system.³³²

³²⁹ Lupfer, *The Dynamics of Doctrine*, 45. See also British War Office, *Summary of Recent Information Regarding the German Army and His Methods*, 42.

³³⁰ Lupfer, *The Dynamics of Doctrine*, 45. See also David T. Zabecki, *Steel Wind: Colonel Georg Bruchmüller and the Birth of Modern Artillery* (Westport, CT: Praeger Publishers, 1994), 37-38.

³³¹ Lupfer, *The Dynamics of Doctrine*, 45. See also Bull, *Stosstrupptaktik*, chap. 8.

³³² Balck, *Development of Tactics—World War*, 84.

The attacking force was organized in different waves, to maximize the penetration of the enemy defensive sector in depth.³³³ The reason is that, since the battle of Verdun in 1916, the Germans recognized that the French and the British had started to structure the defensive layout in depth, in a way similar to their concept of elastic defense.³³⁴ The British Army had adopted a system based on three zones: the forward zone, the battle zone, and the rearward zone.³³⁵ Considering the defense of a brigade sector, each zone was occupied by a battalion. The defenders of the forward zone were tasked with delaying the enemy advance and, possibly, to stop it. This area contained three defensive lines of trenches, with the middle one intended as the main line of resistance. This line was defended by two companies dug-in in linear formation, with two further companies in the rear of the zone, in company-size strongpoints (known as Bird Cages). One of the companies in the rear was designated for counter-attacks.³³⁶ The battle zone was enclosed in two lines of trenches, one in the front and one in the rear. The battalion in defense of this area was arrayed to create a “network” of camouflaged machine gun emplacements, with two companies abreast in the front and two companies in the rear,

³³³ Lupfer, *The Dynamics of Doctrine*, 43-44.

³³⁴ Gudmundsson, *Stormtroop Tactics*, 65.

³³⁵ Samuels, *Doctrine and Dogma*, 119. See also Gudmundsson, *Stormtroop Tactics*, 156-157.

³³⁶ The British concept of defense in depth had not a precise guidance for the purpose of the forward zone. Even if the memorandum of the British General Headquarters (GHQ) officializing this new system of defense reported that this zone “was intended to guard against surprise, break up an enemy attack and cause him to expend considerable quantities of ammunition,” there was also a strong emphasis in retaining the ground at all costs. Samuels, *Doctrine and Dogma*, 119-122.

one of which was designated for counter-attacks.³³⁷ Finally, the rearward zone hosted a network of trenches with the function of providing the last chance to prevent penetration. Although mentioned in the British doctrine, this area never received appropriate consideration in practice.³³⁸

³³⁷ Samuels, *Doctrine and Dogma*, 122-123.

³³⁸ *Ibid.*, 125.

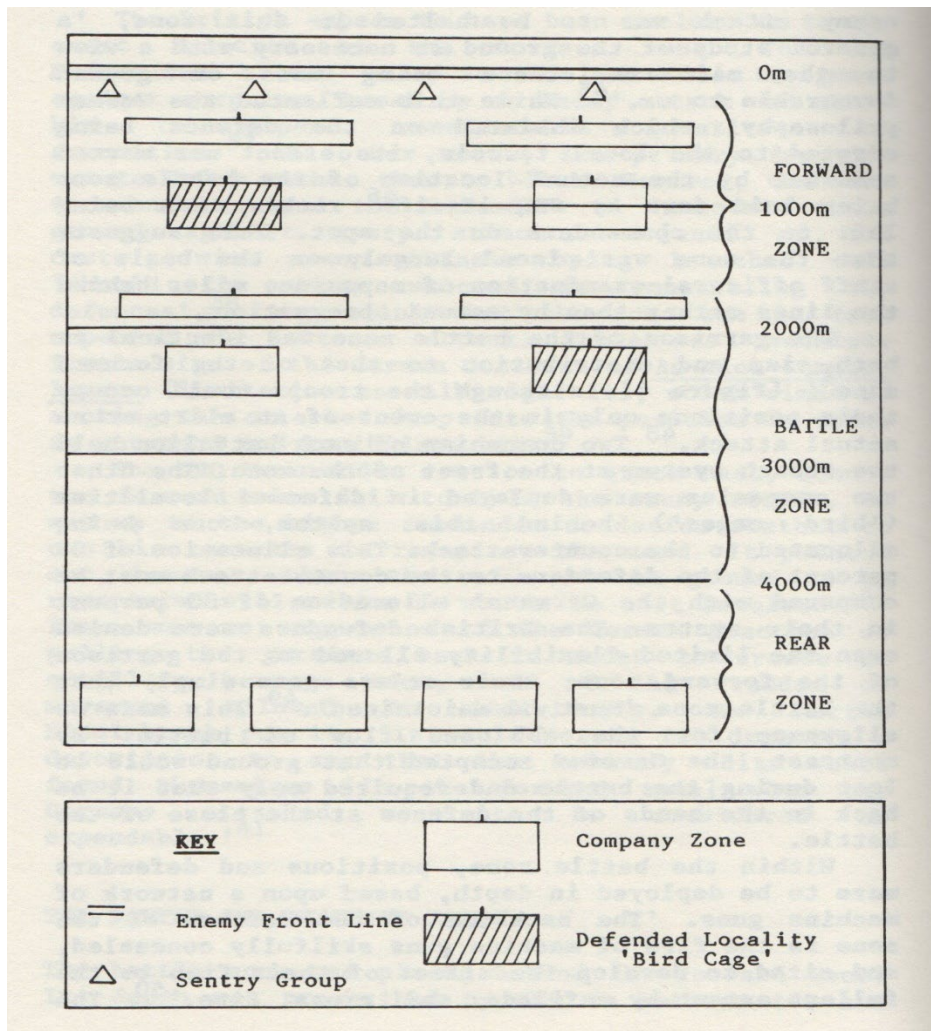


Figure 5. British Front Brigade System

With such a defensive system, the adoption of fight waves³³⁹ in the German doctrine was the best solution to maintain momentum during the attack.³⁴⁰ More in depth, the first wave included a nine-man reconnaissance patrol for each company on the

³³⁹ U.S. Army War College, *German and Austrian Tactical Studies*, 109.

³⁴⁰ Lupfer, *The Dynamics of Doctrine*, 43.

attack line.³⁴¹ The second wave, also called *Sturmwelle* (assaulting wave),³⁴² was mainly composed of *Stosstrupps*, with an employment ratio of two assault squads for each company on the line. Each *Stosstrupp* could be reinforced with a light machine gun team, a grenade launcher team, and a flamethrower team.

In addition, infantrymen from the infantry organization responsible for the attack could be attached to support the assaulting troops and to carry materials and ammunition.³⁴³ The third wave, also called *Aufraumungswelle* (clear-out or mop-up wave),³⁴⁴ included the *Sturmtrupps*' heavy weapons (*Truppwaffen*), supported by field guns and machine guns from the division leading the attack and by a regular infantry element for protection. The rest of the supported infantry division trailed behind, forming the so-called *Verstarkungswelle* (strengthening wave).³⁴⁵

In *Stosstrupptaktik*, once the first wave left the line of departure with the others trailing behind, the advance in the enemy sector was conceived as continuous. Assault tactics envisaged a distance of 250 meters (275 yards) between the first and second waves

³⁴¹ Lupfer, *The Dynamics of Doctrine*, 44. See also Samuels, *Doctrine and Dogma*, 51.

³⁴² U.S. Army War College, *German and Austrian Tactical Studies*, 110.

³⁴³ Lupfer, *The Dynamics of Doctrine*, 44. See also Samuels, *Doctrine and Dogma*, 51-52.

³⁴⁴ U.S. Army War College, *German and Austrian Tactical Studies*, 110.

³⁴⁵ Lupfer, *The Dynamics of Doctrine*, 44. See also U.S. Army War College, *German and Austrian Tactical Studies*, 110.

and of 150 meters (165 yards) between the second and the third.³⁴⁶ In reality, spacing was maintained by visual coordination, with each of the follow-on waves starting its movement as soon as the preceding one arrived in proximity of the adversarial front line.³⁴⁷ The assaulting units adopted an open formation, coordinated at the squad level, advancing across no man's land. As soon as they took hold of the forward edge of the enemy trench system, they exploited the available cover provided by said system, pushing forward in the same order through the communication trenches.³⁴⁸

Each wave performed a specific function in support of the assaulting wave of *Sturmtrupps* that had the task of attacking and overcoming the weakest positions of the enemy system, constantly pushing forward. More precisely, the artillery covered the infantry advance with a rolling or creeping barrage (*Feuerwalze*), providing also counter-battery fire, neutralized specific targets in the rear of the enemy defensive sector, and kept the target area isolated with a box barrage. Coordination with the advancing elements was maintained using pyrotechnics.³⁴⁹ The infantry reconnaissance patrols probed the enemy defensive line, identifying possible "soft spots," but also strongpoints and pillboxes.

³⁴⁶ Lupfer, *The Dynamics of Doctrine*, 44. See also Samuels, *Doctrine and Dogma*, 51, 53.

³⁴⁷ U.S. Army War College, *German and Austrian Tactical Studies*, 108.

³⁴⁸ *Ibid.*, 109.

³⁴⁹ Lupfer, *The Dynamics of Doctrine*, 45. See also Gudmundsson, *Stormtroop Tactics*, 85-86, 113-114.

This information was vital for the assault squads to choose the most convenient points to breach the enemy defenses, conducting a frontal attack with the support of the attached weapons or, whenever possible, an envelopment. The clear-out wave provided immediate suppression of strongpoints that could then be cleared by the *Stosstrupps* with grenades or flamethrowers, and protected the flank of the advancing formation with their machine guns. Finally, the strengthening wave, filtering through the positions seized by the preceding waves, encircled and reduced any pocket of resistance. Additionally, the conventional infantry formations composing this element pushed reinforcements forward as needed.³⁵⁰

Stosstrupptaktik is usually referred to as infiltration tactics. However, this term should be used with caution. In fact, in the current US Army military doctrine, infiltration is defined as “form of maneuver in which an attacking force conducts undetected movement through or into an area occupied by enemy forces to occupy a position of advantage behind those enemy positions while exposing only small elements to enemy defensive fires.”³⁵¹ This definition could, therefore, lead to an erroneous interpretation of the essence of *Stosstrupptaktik*, having a reader think that the assault squads covertly used corridors between strongpoints to push forward. However, in a defensive layout that relies on strongpoints, the space between two adjacent fortifications results even more

³⁵⁰ Lupfer, *The Dynamics of Doctrine*, 44. See also Samuels, *Doctrine and Dogma*, 51-53; Gudmundsson, *Stormtroop Tactics*, 85-86.

³⁵¹ Headquarters, U.S. Department of the Army (HQDA), Field Manual (FM) 3-0, *Operations* (Washington, DC: Government Printing Office, October 2017), 7-27.

protected than the strongpoints themselves, because it is covered by the interlocking fields of fire of both locations.

Instead, the big idea behind the new tactics included the identification of the weakest points of the enemy defensive line, their suppression with the support of the weapon teams accompanying the squad, or the *Truppwaffen* trailing behind, with the final assault and clearing performed by the storm troopers.³⁵² The effectiveness of this method was dictated by the reliance on the squad as an independent element conducting the attack, without the need to advance necessarily in line with adjacent squads. In this way, a *Stosstrupp* receiving fire from a fortified position had the possibility of suppressing said position and, if not able to assault it, could always wait for one of the squads of the adjacent sectors, that had already breached through, to attack the strong point from the flank or the rear.³⁵³

³⁵² Samuels, *Doctrine and Dogma*, 52-53.

³⁵³ Gudmundsson, *Stormtroop Tactics*, 150-151.

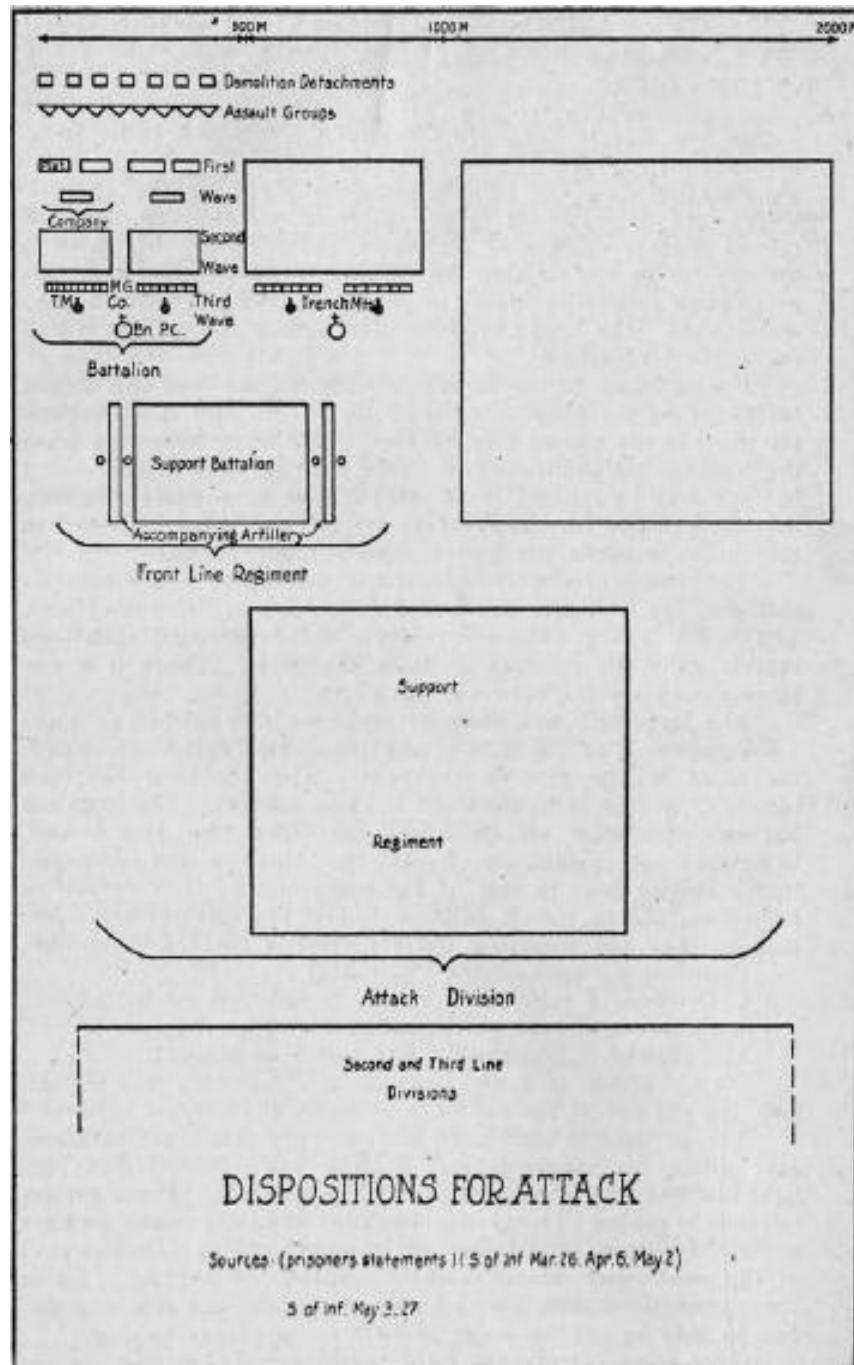


Figure 6. Dispositions for Attack (Breakdown of a German Attack Division)

Source: U.S. War Department, Historical Section, General Staff, American Expeditionary Forces (A.E.F.), *Tactical Studies No. 1: A Survey of German Tactics, 1918* (Washington, DC: Government Printing Office, 1918), 18.

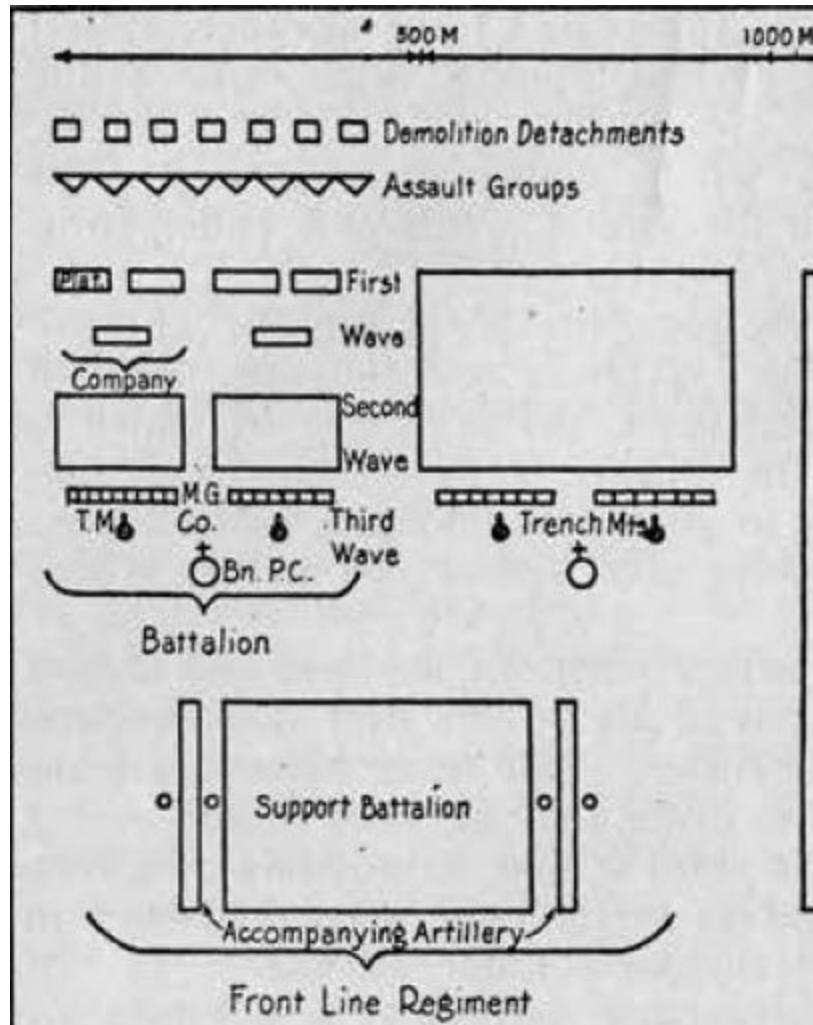


Figure 7. Dispositions for Attack (Close-up of a Front Line Regiment Breakdown in the Framework of an Attack Division)

Source: U.S. War Department, Historical Section, General Staff, American Expeditionary Forces (A.E.F.), *Tactical Studies No. 1: A Survey of German Tactics, 1918* (Washington, DC: Government Printing Office, 1918), 18.

The above-mentioned tactics were generally valid for attacks with limited objectives and raids, with specific adaptations required considering the scope of these activities. The attack with limited objectives was an offensive action conducted to seize a key terrain from the enemy. In this kind of attack, the assault force was oriented on

conquering a specific terrain feature that, in light of its value, was usually well defended. The probability of a counter-attack upon the achievement of the objective was also higher than in full-scale penetration.³⁵⁴ However, the size of the forces involved, the width of the attack frontage, and the span of the depth required in terms of penetration in the enemy defensive sector usually tended to be smaller. In terms of forces, this kind of task was assigned to full-strength infantry battalions or regiments, instead of divisions and armies, with their complement of *Stosstrups*. With these premises, the tactics employed were the same as full-scale attacks, with a more pronounced focus of speed, surprise, and disruption of the enemy's defensive system. The latter was implemented by performing shorter, but more intense, artillery preparation barrages, with a heavy reliance on gas ammunition. Moreover, feints were often executed to disorient the enemy and trigger a response of the adversarial artillery. This allowed the German observers to identify the points of origin of the barrage, so guaranteeing a more effective suppression of the enemy fires during execution.³⁵⁵

In addition, the adherence to a designated timeline, designed to achieve the seizure of the intended key terrain immediately before sunset, was critical. In this way, when darkness fell, it concealed the consolidation of the assault force on the target.³⁵⁶ Whereas the tasks of the artillery and the first three waves remained unchanged during execution, the strengthening wave assumed the responsibility to quickly consolidate on

³⁵⁴ Gudmundsson, *Stormtroop Tactics*, 28.

³⁵⁵ Gudmundsson, *Stormtroop Tactics*, 103-104. See also Balck, *Development of Tactics—World War*, 169-170.

³⁵⁶ Balck, *Development of Tactics—World War*, 170-171.

the seized objective in such a manner to guarantee a defense in depth against any possible counter-attack brought forth by the enemy.³⁵⁷ Overall, in this type of attack, effective dissemination of orders and a high level of coordination and synchronization of all the units in play became even more critical than in large scale attacks.³⁵⁸

³⁵⁷ Balck, *Development of Tactics—World War*, 174-175.

³⁵⁸ *Ibid.*, 170, 174.

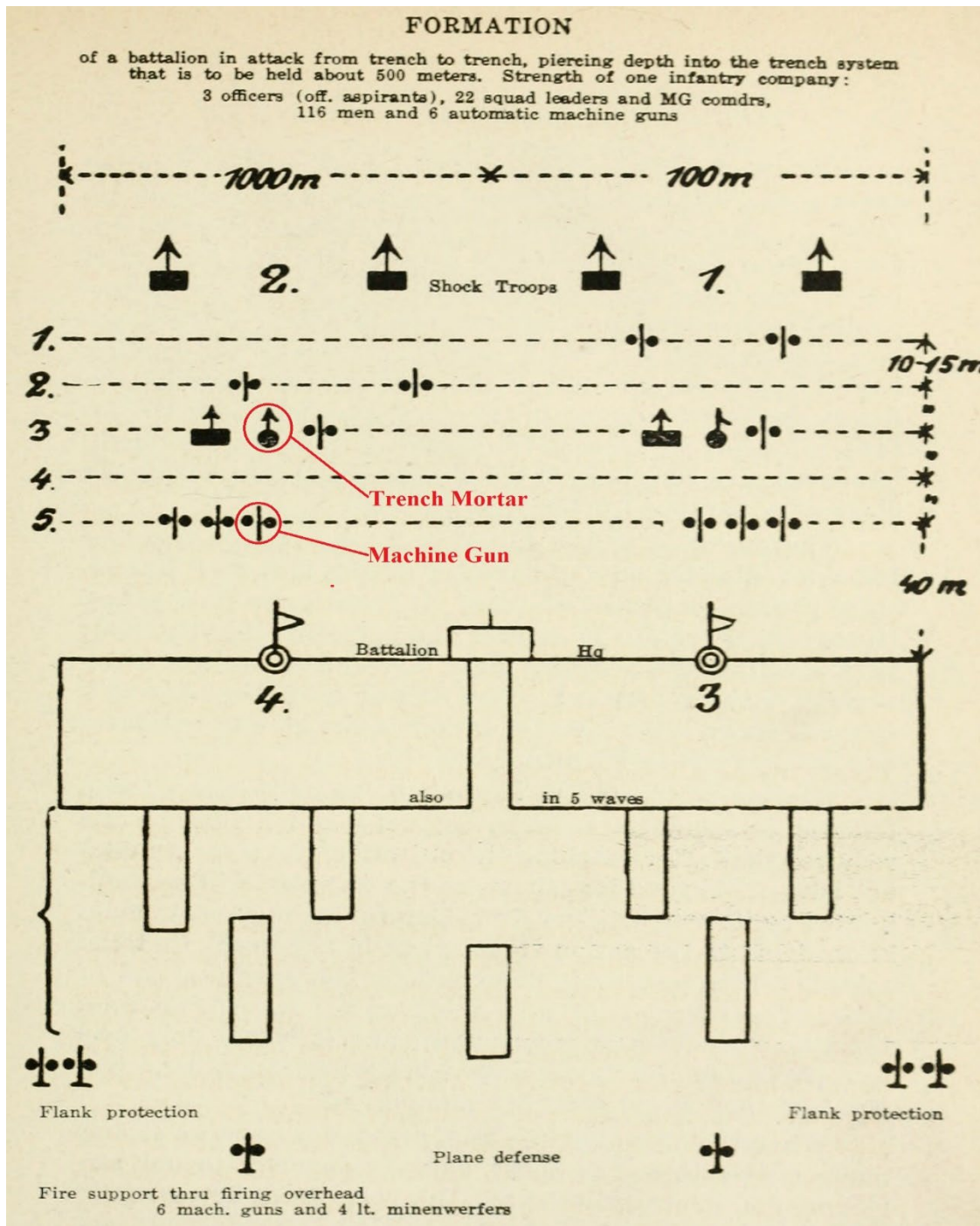


Figure 8. Formation of a Battalion in Attack from Trench to Trench, Piercing Depth into the Trench System that is to be Held about 500 Meters (Attack with Limited Objectives)

Source: Wilhelm Balck, *Development of Tactics—World War*, trans. Harry Bell (Fort Leavenworth, KS: The General Service Schools Press, 1922), 173. Notes in red added by the author.

Trench raids were swift offensive actions conducted against specific locations in the enemy trench system to collect information, capture prisoners, harass the adversary, and degrade his morale. As in attacks with limited objectives, these operations relied on speed of execution, surprise, and violence of action to strike the enemy positions without warning and subsequently exfiltrate back to the friendly lines. A raiding force was usually a platoon or company-size element.³⁵⁹ For this reason, this was the only type of mission that allowed the use of formations composed entirely by storm troopers, except for the supporting indirect artillery units.³⁶⁰

Conclusion

The spectacular tactical successes of the German Army achieved with the so-called Peace Offensive of May 1918 were a clear indicator of the effectiveness of the *Sturmabteilung* in developing and spreading the *Stosstrupptaktik* among the German military institution. As posited by Gudmundsson, these innovative tactics brought forth a radical change affecting the way the infantry formations were equipped, the way they fought in battle, and their key command and control processes. If the first two points are easily understandable, the last one requires a more in-depth explanation. The standardization of the *Stosstrupptaktik* established the infantry squad as the basic level of employment in battle. Therefore, the status of tactical decision-maker that at the beginning of the war was held by battalion commanders was decentralized to NCOs and

³⁵⁹ British War Office, *Summary of Recent Information Regarding the German Army and His Methods*, 45-46. See also Balck, *Development of Tactics—World War*, 175.

³⁶⁰ Gudmundsson, *Stormtroop Tactics*, 182.

junior officers. This shift of responsibilities made the role of the battalion commander more akin to the day position, his main responsibilities laying in the formulation of his intent, the assignment of tasks, and the provision of resources to the companies, platoons, and squads operating on the ground.³⁶¹

Even though the implementation of these new measures did not suffice to guarantee victory to the German Army in the Great War, it is undeniable the great significance they held in the history of modern warfare and in the evolution of the modern western military institutions. This begs the question of whether the *Sturmabteilung* should be considered a key element in this extremely innovative process. The answer is not straightforward.

Immediately after the war, General Oskar von Hutier, commander of the German Eighteenth Army during the Peace Offensive (also known as Michael Offensive), was depicted by the French press as the innovator behind the new offensive tactics, by virtue of the astounding successes he obtained against the British Fifth. The influence of the Allied press in the military institutions of the time was such that the new offensive tactics became known as “Hutier tactics.” However, the historian Laszlo M. Alföldi, in his article “The Hutier Legend,” disproved this theory, classifying it as a mere legend, introduced by the French press to justify the inexplicable German tactical victory in the spring of 1918.³⁶²

³⁶¹ Gudmundsson, *Stormtroop Tactics*, 171-172.

³⁶² Laszlo M. Alföldi, “The Hutier Legend,” *Parameters* 5, no. 2 (1976): 73, accessed January 13, 2020, <https://apps.dtic.mil/dtic/tr/fulltext/u2/a531980.pdf>.

The explanation provided by Gudmundsson, on the contrary, appears to be more objective and exhaustive. This historian categorizes this achievement as the result of multiple factors, including the institutional support granted by the German Army leadership (General Ludendorff and Crown Prince Wilhelm), the feats of certain German officers, such as Captain Rohr and Colonel Bruchmüller, the debates in tactics of the pre-war period, the specific situation of the German Army and the resources available, the tradition of the *Jäger* and *Pionier* units. In addition, the level of decentralization in the command structure and the education of the German officers' class decisively enabled the process of innovation that took place.³⁶³

Historian Timothy T. Lupfer, provides an explanation to the German innovation process, in line with Gudmundsson:

The process of developing principles to obtain this objective [principle of defense and offense to defeat the enemy] was a collective or corporate effort. Individual talents and personalities were essential, but the doctrine emerged in an atmosphere where ideas were discovered and shared, not invented and arbitrarily imposed. OHL solicited ideas and experience from subordinate units, and this genuine interest gave the final product the wide ownership that eased the acceptance and application of the doctrine.³⁶⁴

Although both Gudmundsson and Lupfer do not explicitly mention the *Sturmtruppe*s in their assessment of the factors enabling the process of doctrinal innovation of the German Army, the contribution of these units is undeniable. First, the men of *Sturmbataillone*, following the example of Captain Rohr, effectively developed, defined, and refined that ensemble of TTPs underpinning the reformed German defensive

³⁶³ Gudmundsson, *Stormtroop Tactics*, 172-173.

³⁶⁴ Lupfer, *The Dynamics of Doctrine*, 57.

and offensive doctrine. These TTPs were initially summarized in the *Instructions for the Employment of an Assault Battalion*, written by Captain Rohr. Subsequently, those tactics and techniques merged into the training manual *Ausbildungs-vorschrift der Fusstruppen* (AVF) (*Training Manual of the Foot Troops*), written by Major General Fritz von Lossberg and published in two editions (January 1, 1917, and January 1, 1918).³⁶⁵ Moreover, *Stosstrupptaktik* also inspired the two main German doctrinal manuals: *the Principles of Command in the Defensive Battle in Position Warfare* of December 1, 1916,³⁶⁶ and *the Attack in Position Warfare* of January 1, 1918.³⁶⁷

Secondly, the *Sturmbataillone* disseminated the new assault tactics. In this respect, the fact that after eighteen months from their inception, the assault techniques became the standard for the German infantry formations, gives credit to the role of the *Sturmbataillone* and of the provisional *Stosstrupps* in teaching and spreading the new tactical doctrine.³⁶⁸ Although the historian John Bull sees the necessity to differentiate the assault divisions from the trench divisions as a failure of the initial OHL's plan,³⁶⁹ Lupfer maintains that this discrimination was "unfortunate but unavoidable for economic

³⁶⁵ Samuels, *Command or Control?*, 241-242. See also Gudmundsson, *Stormtroop Tactics*, 86, 147-148.

³⁶⁶ Lupfer, *The Dynamics of Doctrine*, 16, 19, 27. See also Samuels, *Doctrine and Dogma*, 172.

³⁶⁷ Samuels, *Command or Control?*, 242-245. See also Gudmundsson, *Stormtroop Tactics*, 86, 149-151; Lupfer, *The Dynamics of Doctrine*, 43.

³⁶⁸ Samuels, *Doctrine and Dogma*, 30-31.

³⁶⁹ Bull, *Stosstrupptaktik*, chap. 8.

reasons.”³⁷⁰ Finally, it is important to remember that the organic *Sturmabteilung* of the trench divisions continued to provide specialized skills in assault tactics.³⁷¹

The *Sturmtruppen*' dual nature was the feature that made them unique in the German Army. They displayed a mentality, performance standards, and procedures proper of modern special forces formations, and the *Stosstrupp* idea heavily influenced the process of creation of the first German airborne units and special forces units in the Second World War.³⁷² Looking at the *Sturmtruppen* under this perspective, a critique could be made, in line with the negative conception of Field Marshal Slim concerning special units, that this kind of units affected “the quality of the rest of the Army, especially of the infantry, not only by skimming the cream off it, but by encouraging the idea that certain of the normal operations of war were so difficult that only specially equipped *corps d'élite* could be expected to undertake them.”³⁷³ However, considering the vital contribution furnished by the *Stosstruppen* in developing and disseminating an innovative set of assault tactics throughout the German organization, this critique would be inappropriate.³⁷⁴

³⁷⁰ Lupfer, *The Dynamics of Doctrine*, 49.

³⁷¹ Gudmundsson, *Stormtroop Tactics*, 152.

³⁷² Bull, *Stosstrupptaktik*, “Conclusion.”

³⁷³ William Slim, *Defeat into Victory: Battling Japan in India and Burma, 1942-1945* (New York, NY: Cooper Square Press, 2000), 547, quoted in Samuels, *Doctrine and Dogma*, 30.

³⁷⁴ Samuels, *Doctrine and Dogma*, 30-31.

Bull recognizes that “the Stormtroop ideas of World War I made possible the infantry contribution to *Blitzkrieg* of 1940. Indirectly, they also assisted in the evolution of the tactics of other arms, such as those of the parachutists and other special forces.”³⁷⁵ Moreover, Samuels maintains that “The effectiveness of the German infantry during the Second World War was to no small extent the consequence of their father’s instruction and example in the *Sturmbataillone*.”³⁷⁶ Overall, the legacy of the *Sturmtruppen*, both as combat and instructional formations, defines the merits of these atypical elite formations of the German Army during the Great War.

³⁷⁵ Bull, *Stosstrupptaktik*, “Conclusion.”

³⁷⁶ Samuels, *Doctrine and Dogma*, 31.

CHAPTER 4

ARDITI: THE ELITE ASSAULT TROOPS OF THE ROYAL ITALIAN ARMY

Drummed their boots on the camion floor,
Hob-nailed boots on the camion floor.
Sergeants stiff,
Corporals sore.
Lieutenant thought of a Mestre whore—
Warm and soft and sleepy whore,
Cozy, warm and lovely whore;
Damned cold, bitter, rotten ride,
Winding road up the Grappa side.
Arditi on benches stiff and cold,
Pride of their country stiff and cold,
Bristly faces, dirty hides—
Infantry marches, Arditi rides.
Grey, cold, bitter, sullen ride—
To splintered pines on the Grappa side
At Asolone, where the truck-load died.

—Ernest Hemingway, *Riparto d'Assalto*

We approach the enemy line, as shells land like drumbeats. Suddenly we yell a formidable *A noi!* The artillery stops at once and hundreds of Thevenots [a type of grenade], after one or two seconds, fall on the enemy trenches. There is a tremendous blast, soon followed by machine gun bursts. Some arditi fall but the others pass over the wire and spread out on the mountain top, searching out the enemy in every recess, in every trench in every bunker, shouting *Messe a Noi*. They are like Devils, passing over from one target to another: a Thevenot, a jet flamethrower and away! To the next one! And after a while everything is broken up, destroyed. The Austrian soldiers see the arditi ahead, on the left, on the right, behind them ... we stop only when we do not find any more of the enemy.

—Alberto Businelli, *Gli Arditi del IX*³⁷⁷

³⁷⁷ In order to facilitate the comprehension of the above-reported quotation, it is appropriate to specify the meaning of the expression “*A noi!*.” This was part of the *Arditi*’s motto and is translated in the English language as “to us.” Essentially, the *Arditi* replaced the traditional battle cry of “*urrah!*,” shouted by the soldiers after the command “*ip, ip, ip!*,” with this specific formula. At the beginning of 1918, the initial “*ip, ip, ip!*” was replaced by the question “to whom the honor?” shouted by the commanding officer of the *Arditi* formation before battle. See Farina, *The Italian Assault Troops*, 213-214.

About the action of Mount San Gabriele (September 4, 1917), a superior officer [of the Austro-Hungarian Army] literally said: “We found ourselves prisoners before noticing that the Italians had started advancing.” And another [officer] summarizes his opinion [on the Italian assault troops]: “Nothing resists to the *Arditi*.”

–Salvatore Farina, *Le Truppe d'Assalto Italiane*.³⁷⁸

The fourth chapter of this thesis presents the *Arditi*, the special assault units created in the Royal Italian Army during the First World War. The characterization of the history, force structure, equipment, training, and tactics of this military formation constitutes a necessary step to conduct the intended comparative analysis with the German shock troops later, in Chapter Five.

As posited by the military historians Basilio Di Martino and Filippo Cappellano, the establishment and the development of the *Arditi* formations represented one of the most, if not the most, original and productive examples of innovation in Italian military art during the 20th century.³⁷⁹ The remarkable deeds of the Austro-Hungarian *Sturmtrupps* on the Italian Front at the beginning of 1917 initially inspired the creation of specialized and dedicated assault formations in the Italian Army.³⁸⁰ However, the concerted efforts of a handful of visionary Italian infantry officers, with the full support

³⁷⁸ The quotations of the Austro-Hungarian officers derive from Headquarters, Italian Second Army, Intelligence Section, *Gli arditi e la loro tattica nel giudizio e attraverso le impressioni degli ufficiali e della truppa nemica* [*The Arditi and their tactics in the opinion and according to the impressions of the enemy officers and troops*], Classified dispatch n. 2372 (Isonzo sector, Italian Front, October 11, 1917), quoted in Farina, *The Italian Assault Troops*, 1.

³⁷⁹ Di Martino and Cappellano, *The Italian Assault Units in the Great War (1915-1918)*, 1:257.

³⁸⁰ *Ibid.*, 1:55-57, 257.

of the Italian Army Supreme Command, evolved this initial concept in a unique model, without equivalent in the other military organizations of the *Entente*.³⁸¹

Upon their creation, the *Arditi* became a separate specialty of the Italian Army's infantry branch, at the same level as the existing *Bersaglieri* and *Alpini* units.³⁸² This outfit was the solution to the impasse of trench warfare, an instrument of choice for the penetration and disruption in depth of the Austrian defenses on the Italian Front.³⁸³ In the reorganization of the Italian Army that followed the tragic debacle of Caporetto, the standards set by the *Arditi* in the training, organizational and doctrinal domains provided a source of inspiration for the military institution as a whole.³⁸⁴ In this contribution lies the *Arditi*'s significance, in addition to the acts of valor accomplished on the battlefield.

³⁸¹ Di Martino and Cappellano, *The Italian Assault Units in the Great War (1915-1918)*, 1:257.

³⁸² Di Martino and Cappellano, *The Italian Assault Units in the Great War (1915-1918)*, 1:58. The *Bersaglieri* units are a peculiar specialty of the Italian infantry. Still existing today, these units were first established in 1836, following the proposal of General Alessandro La Marmora, in the then Army of the Kingdom of Sardinia, that became the Royal Italian Army after the Italian unification in 1861. These troops were specialized as high mobile light infantry, with the task of acting primarily as skirmishers and as shock troops when needed. See “*Bersaglieri*,” Esercito Italiano, accessed March 22, 2020, <http://www.esercito.difesa.it/en/organization/Armies-and-Corps/Infantry/The-Specialties/Bersaglieri>. The *Alpini* units are another specialty of the Italian infantry branch, specialized in mountain warfare. These units were first created in 1872, following the project of Captain Giuseppe Perrucchetti, for the defense of the mountainous portions of the Italian borders. See “*Gli Alpini*,” Esercito Italiano, accessed March 22, 2020, <http://www.esercito.difesa.it/en/organization/Armies-and-Corps/Infantry/The-Specialties/Alpines>.

³⁸³ Di Martino and Cappellano, *The Italian Assault Units in the Great War (1915-1918)*, 1:68. See also Pirocchi, *The Arditi*, 9; Morisi, *Hell in the Trenches*, v.

³⁸⁴ Di Martino and Cappellano, *The Italian Assault Units in the Great War (1915-1918)*, 1:79, 118, 153-154, 360-361. See also Pirocchi, *The Arditi*, 119-120.

For a long time, the assault battalions did not receive proper recognition for their deeds, in light of the association with Fascism in the aftermath of the Great War.³⁸⁵ The history of the Italian shock troops, from their inception in June 1917 to their final disbandment in 1921, clearly illustrates the real scope of their direct and indirect contribution to the outcomes of the war and the resurgence of the Italian Army.

Origin and History of the *Arditi*

The official birth of the *Arditi* units followed the issue of the Italian Army Supreme Command's circular no. 111660, *Assault Battalions (Riparti d'assalto)*, dated June 26, 1917. This document ratified the establishment of at least one company-level special assault unit for each field army in the Italian land forces. These outfits were to be dedicated to the break-in, penetration, and disruption in depth of enemy defenses with specific reference to the context of trench warfare.³⁸⁶

As posited by the historian Giorgio Rochat, there are two main schools of thought in Italian military historiography concerning the birth of the *Arditi*. The first recognizes as precursors of the Italian assault units the specialized outfits created between 1914 and 1917 to enable a more aggressive posture in trench warfare. The most famous proponent of this interpretation is Cristoforo Baseggio, who commanded an independent reconnaissance company within the V Corps (First Army) in 1915-1916, serving in the

³⁸⁵ Rochat, *The Arditi of the Great War*, 11.

³⁸⁶ Di Martino and Cappellano, *The Italian Assault Units in the Great War (1915-1918)*, 1:65. See also Rochat, *The Arditi of the Great War*, 35-36.

Valsugana sector (Trento).³⁸⁷ During the interwar period, in 1929, Baseggio claimed the paternity of the *Arditi* idea in his book, *La Compagnia della Morte: La Compagnia Arditi "Baseggio"* (*The Death Company: The Arditi Company "Baseggio"*).³⁸⁸

Another current of thought considers, instead, the assault battalions as something unprecedented by virtue of their training, organization, doctrine, and esprit de corps. The most renowned proponent of this idea is Salvatore Farina. This officer served in the I Assault Battalion of the Second Army during the Great War. In the 1930s, he wrote one of the most objective and complete accounts on this topic, the book, *Le Truppe d'Assalto Italiane (The Italian Assault Troops)*. The essence of his claim is that the *Arditi* were born as a separate specialty of the infantry branch, a special type of unit with a distinct character. In contrast, the units commonly considered as precursors were only specialized troops with a *niche* employment in the framework of the Italian Army's standard organization, equipment, and training.³⁸⁹

Recognizing the complexity of the internal organizational dynamics of a military institution, especially in wartime, it becomes possible to look at this phenomenon from a different point of view. The Italian *Arditi* concept sprouted from the convergence of different experiments made in 1915-1916, with the evolution of military doctrine promoted by the Supreme Command in search of a way to instill aggressiveness and maneuver in the Italian ranks. The idea was catalyzed by the observation and study of the

³⁸⁷ Rochat, *The Arditi of the Great War*, 27.

³⁸⁸ Farina, *The Italian Assault Troops*, 42-43.

³⁸⁹ Rochat, *The Arditi of the Great War*, 28.

Austro-Hungarian *Sturmtrupps* tactics between the end of 1916 and the beginning of 1917.

The substantiation of this interpretation needs three main references. First, it borrows the ideas behind the notion of “horizontal innovation” proposed by the historian Robert Foley in the analysis of the innovation of the German Army during the Great War,³⁹⁰ already used in Chapter Three to analyze the *Sturmtrupps* origins. This concept envisages the spread and consolidation of an informal doctrine, made by new practices horizontally shared between military units.³⁹¹ Later this doctrine is accepted by the military institution, which allocates the resources and creates the conditions to implement it fully.³⁹²

The second supporting point implies that the exchange of innovative ideas between the various European military organizations at the end of the 19th century³⁹³ was present during the Great War.³⁹⁴ More precisely, every warring faction incorporated successful practices and notions fielded by their opponents in their processes of innovation, through an attentive study of the enemy conducted by their intelligence services.³⁹⁵ The third milestone for the perspective offered in this paper sprouts from the

³⁹⁰ Foley, “A Case Study in Horizontal Military Innovation,” 803, 821.

³⁹¹ *Ibid.*, 803.

³⁹² *Ibid.*, 821.

³⁹³ Showalter, “The Prusso-German RMA, 1840-1871,” 112-113.

³⁹⁴ Bull, *Stosstrupptaktik*, “Conclusion,” Kindle.

³⁹⁵ Bull, *Stosstrupptaktik*, “Conclusion.”

study of the various initiatives in small-unit trench operations in the Italian Army, the evolution of the Italian tactical doctrine, and the influence of the Austro-Hungarian *Sturmtrupps* concept, presented by Di Martino and Cappellano in the first two chapters of their study on the Italian assault troops.³⁹⁶

The analysis of the *Arditi* origins proposed in this section of Chapter Four will synthetically review the various experiments in small-unit tactics conducted at the army echelon in 1915-1916, the parallel institutional development in the same time frame, and the role of the Austrian *Sturmtrupps* concept in this process. After the definition of these necessary premises, the present study will outline the history of the Italian assault units from their official activation to their final disbandment at the end of the conflict.

At the onset of the Great War, the Italian Army, as well as the other European military institutions, did not include any specialized units dedicated to the break-in and penetration of enemy defensive systems in its order of battle. The average infantry battalion incorporated a homogenous mass of equally trained and equipped infantrymen. The only outfit with different capabilities was a machine gun section of two weapons.³⁹⁷

³⁹⁶ Di Martino and Cappellano, *The Italian Assault Units in the Great War (1915-1918)*, 1:7-64.

³⁹⁷ *Ibid.*, 1:7.

The infantry regiment,³⁹⁸ in addition, included another special-purpose unit, the reconnaissance platoon.³⁹⁹

The scout qualification appeared in the Italian Army in June 1914, following the distribution of the updated version of the manual, *Regolamento d'esercizi per la fanteria (Infantry Exercise Regulation)*. The attainment of this specialization included a selection to test the physical and intellectual capabilities of the candidates, an *ad hoc* training course conducted in each parent unit, and a final exam held by a regimental commission. The qualification implied some privileges, such as more abundant food rations, longer periods of rest between services, and the authorization to leave the rucksack, to be more agile during the operations. At the beginning of the war, each infantry regiment and *Alpini* battalion had its own organic reconnaissance platoon. Its tasks were reconnaissance, counter-reconnaissance, and screening of the front and flanks of the main body formations during movement. In the defense, the reconnaissance platoon was also responsible for patrolling no man's land.⁴⁰⁰

³⁹⁸ At the beginning of the war, the organizational structure of the Italian Army included the divisional, brigade, regimental and battalion level for the infantry formations. An infantry division was composed of a divisional HQ two infantry brigades, one field artillery regiment, one engineer company and an array of sustainment units. An infantry brigade incorporated a brigade HQ and two infantry regiments. An infantry regiment contained a HQ, three infantry battalions, one machine gun section and a logistical train (on pack animals). Finally, an infantry battalion comprised a HQ, four infantry companies and one machine gun section. Di Martino and Cappellano, *The Italian Assault Units in the Great War (1915-1918)*, 1:401-408.

³⁹⁹ Di Martino and Cappellano, *The Italian Assault Units in the Great War (1915-1918)*, 1:7-8. See also Pirocchi, *The Arditi*, 18; Morisi, *Hell in the Trenches*, 194; Farina, *The Italian Assault Troops*, 34.

⁴⁰⁰ Di Martino and Cappellano, *The Italian Assault Units in the Great War (1915-1918)*, 1:7-8. See also Pirocchi, *The Arditi*, 18; Farina, *The Italian Assault Troops*, 34-35.

After the first weeks of the war, and upon the consolidation of the front, it appeared clear that this kind of formation could not have provided a significant contribution in the context of the trenches. The reconnaissance unit still retained some sort of usefulness in the mountainous sectors of the front, where the terrain dictated longer distances between the frontal defensive trenches of the opponents.⁴⁰¹ This situation caused an evolution in the employment criteria of this kind of outfit. Hence, they evolved to include limited offensive tasks, such as combat reconnaissance patrols in no man's land and small raids against isolated positions of the enemy's front line.⁴⁰²

In certain areas of the front, such as the Valsugana (Trento), a series of experiments started at the army echelon to explore the full potential of the reconnaissance units. The most famous of these initiatives entailed the activation of a *Compagnia Volontari Esploratori* (Volunteer Scout Company) on November 15, 1916. This unit, commanded by Captain Cristoforo Baseggio, was under the direct control of the V Corps (First Army). It is interesting to notice that the company comprised elements of every combat branch, qualified as scouts, and organized in six platoons, one for each specialty.⁴⁰³ After the execution of an intense reconnaissance activity and some limited successful combat operations, such as the raid on the *Glockenturm* (Mount Collo, in the

⁴⁰¹ Di Martino and Cappellano, *The Italian Assault Units in the Great War (1915-1918)*, 1:8. See also Pirocchi, *The Arditi*, 18; Farina, *The Italian Assault Troops*, 36-38.

⁴⁰² Di Martino and Cappellano, *The Italian Assault Units in the Great War (1915-1918)*, 1:8. See also Farina, *The Italian Assault Troops*, 38.

⁴⁰³ Di Martino and Cappellano, *The Italian Assault Units in the Great War (1915-1918)*, 1:9. See also Pirocchi, *The Arditi*, 19-20; Farina, *The Italian Assault Troops*, 41-42.

vicinity of Trento), this outfit was disbanded on April 12, 1916. The reason it was dissolved was twofold. First, the company had suffered heavy losses in an offensive operation on Mount Sant'Osvaldo (Trento), executed in close cooperation with elements of the 84th Infantry Regiment on April 4, 1916. Second, the progressive reduction of no man's land in the First Army's sector did not justify the expenditure of further resources to reconstitute this kind of asset.⁴⁰⁴

Albeit this experiment showed a first attempt to field new solutions, it did not yield any decisive result. The tactics, techniques, and procedures (TTP) were the ones in use at that time in the Italian Army, and this unit had not received nor employed any specific equipment. Belonging to a one-of-a-kind asset, the men of this outfit probably developed some sort of specific esprit de corps. However, this factor alone is not enough to categorize it as a special unit.⁴⁰⁵

Following this first test, Lieutenant General Gaetano Zoppi, Commander of the V Corps (First Army), carried on refining the concept of employment of his reconnaissance units. He envisaged the integration of the regimental scout formations with volunteers in possession of specific technical abilities (such as mountain guides), and submachine gun sections.⁴⁰⁶ These units, different from Baseggio's company, would have received an *ad*

⁴⁰⁴ Di Martino and Cappellano, *The Italian Assault Units in the Great War (1915-1918)*, 1:9-15. See also Pirocchi, *The Arditi*, 19-20; Farina, *The Italian Assault Troops*, 42.

⁴⁰⁵ Di Martino and Cappellano, *The Italian Assault Units in the Great War (1915-1918)*, 1:15. See also Farina, *The Italian Assault Troops*, 44-46.

⁴⁰⁶ The 9-millimeter light machine gun Fiat Revelli, also known as Villar Perosa submachine gun, was introduced in the Italian Army's arsenal in April 1916, with the

hoc program of instruction and would have been employed to achieve specific effects on the battlefield in support of each parent command. It is interesting to remark how the proposals of Zoppi's divisional commanders also encompassed the organization of these outfits in squads and the distribution of mountaineering equipment, grenades, wire cutters, and explosive tubes. They intended to increase the mobility, combat, and breaching potential of this asset.

The final concept, authorized by General Zoppi in April 1916, envisaged a unit still focused on reconnaissance, but also trained to spearhead infantry formations in the attack and to breach obstacles. Although the attachment of a submachine gun section had disappeared from the final document, there were many traits that later would have been a trademark of the *Arditi*. These items, more specifically, included the use of grenades and muskets (carbines) to replace the standard rifle, the lightening of individual equipment, the secondary task of conducting small-unit raids against isolated enemy outposts, and certain privileges, such as exclusion from guard and *corvée* duties and the reward of pay and leave bonuses for successful actions.⁴⁰⁷

In May and June 1916, similar experiments were carried on by the VI Corps (Third Army) under the command of Lieutenant General Luigi Capello, responsible for the sector including the city of Gorizia (Isonzo area). This officer later became a critical enabler in the establishment and the development of the *Arditi* battalions. At this stage, he

intent of fielding one two-weapon section for each infantry battalion. See Di Martino and Cappellano, *The Italian Assault Units in the Great War (1915-1918)*, 1:16.

⁴⁰⁷ Di Martino and Cappellano, *The Italian Assault Units in the Great War (1915-1918)*, 1:15-21.

promoted a wide array of initiatives among his subordinate units aimed at the creation of chosen assault units as the natural evolution of the reconnaissance platoons. Capello focused his efforts on the execution of small offensive operations. Taking inspiration from the Austrian tactics, he saw the conduct of fast and violent raids, enabled by a swift artillery barrage, as a perfect way to rekindle the aggressiveness of the Italian soldier, but also to wear the adversary out.⁴⁰⁸

On July 11, 1916, Capello authorized the activation of “chosen patrols for the conduct of audacious operations” (*pattuglie elette per la condotta di operazioni ardite*) in every infantry regiment under his command. Composed of specifically trained personnel (one NCO and four soldiers), these outfits had the role of spearheading the operations of their parent formations, facilitating the break-in and disrupting the enemy in depth. These patrols would have been trained to assault under the coverage of friendly artillery, exploiting its effects to catch the defenders when they were still inside their dugouts.⁴⁰⁹

In addition to the experiment of the chosen patrols, the VI Corps also took part in another initiative, promoted by the Army Supreme Command itself. The subordinate 12th Division participated in the creation and testing of *compagnie scodati* (companies composed of soldiers with shields), manned by pioneers equipped with special ballistic shields (Masera model shields), armor, and helmets.⁴¹⁰ Their task was to advance into no man’s land and to prepare the terrain for an attack by their parent formations, by

⁴⁰⁸ Di Martino and Cappellano, *The Italian Assault Units in the Great War (1915-1918)*, 1:21-22.

⁴⁰⁹ *Ibid.*, 1:27-28.

⁴¹⁰ *Ibid.*, 1:22-24.

breaching the enemy obstacles and wires with mechanical tools and explosive tubes. The men of these specialized assets followed a training *curriculum* at instruction camps established in the Isonzo area, where the consistency of the enemy defenses was like that of the Western Front.

Ultimately, this experiment led to the activation of other units of this type between the second half of 1915 and the second half of 1916. However, the advent of the trench mortar, acquired by the Italian Army in August 1916, marked the end of this endeavor. This kind of indirect-fire weapons represented the best instrument to rapidly destroy enemy obstacles without exposing friendly personnel. Thus, the interest in training and maintaining shield companies quickly decreased until the Army Supreme Command ordered their disbandment on July 5, 1917.⁴¹¹

An attentive analysis of the various initiatives described insofar reveals some common traits. First, the initiatives all resulted in the establishment of some sort of specialized unit or asset, with the essential task of patrolling no man's land or breaching adversarial obstacles. Second, although most of these outfits, from the Baseggio's company to General Capello's chosen patrols, also had an offensive orientation, this was always a secondary effort. Third, the training methods and the TTPs used by these formations did not differ significantly from the Italian tactical doctrine, except for the instructions related to new technical means, such as explosive tubes, shields, or grenades. Fourth, the selected units never received the responsibility nor the training to disrupt the

⁴¹¹ Di Martino and Cappellano, *The Italian Assault Units in the Great War (1915-1918)*, 1:24. See also Pirocchi, *The Arditi*, 18-19; Farina, *The Italian Assault Troops*, 36-38.

enemy defenses in depth. Overall, the increasing reduction of no man's land areas, caused by the enlargement of the first line of trenches on both sides, highlighted the necessity of a radical transformation of the tactical methods in use. There was the need for a "more dynamic approach," based on the maneuver of small offensive elements, not around, but directly through the enemy entrenchments.⁴¹²

The first innovative ideas related to the concept of infiltration and disruption in depth are attributable to Colonel Brigadier Francesco Saverio Grazioli, commander of the Lambro Brigade since May 26, 1916. Previously he had served as Chief of Staff of the XIII Corps HQ, deployed in the sector of the Carso Plateau since July 1915, under the Third Army. In this role, Grazioli could appreciate the challenges presented by trench warfare and, most of all, assess the main doctrinal flaws of the Italian formations from a comprehensive point of view. The Lambro Brigade had just withdrawn from the Asiago Plateau, where it contributed to the defense against the Austrian offensive called *Strafexpedition* (Punitive Expedition, from May 16 to June 10, 1916).⁴¹³

In June and July, while the brigade was resting and refitting, Colonel Grazioli prepared a pamphlet titled *Special Platoons (Plotoni Speciali)*. In this document, he envisaged the creation of special 30-man platoons for each regiment, articulated on three "patrols" and reinforced by a submachine gun section each. Their mission was the conduct of shaping actions that included the infiltration of the foremost enemy trenches. The intent was to envelop the adversarial positions, while they sustained the brunt of the

⁴¹² Di Martino and Cappellano, *The Italian Assault Units in the Great War (1915-1918)*, 1:28-29.

⁴¹³ *Ibid.*, 1:29-31.

parent units' attack. These outfits retained competencies in reconnaissance and counter-reconnaissance. However, their *raison d'être* was the penetration of the adversarial lines and the neutralization of critical defensive elements (such as weapon emplacements). The prerequisites of this concept were the ability to exploit terrain in the approach, the availability of automatic weapons, and the reliance on speed and surprise to reach the enemy outposts under the effects of the initial artillery barrage. Grazioli even postulated the possibility of aggregating the special platoons in a company controlled by the brigade HQ, to facilitate the administration of a program of instruction focused on physical training and reconnaissance TTPs. However, the training plan devised by Grazioli did not present any innovative elements, other than an emphasis on the physical preparation of the soldier.⁴¹⁴

In preparation for the Sixth Battle of the Isonzo, on August 6, 1916, the Lambro Brigade was assigned to the 24th Division (VI Corps of the Third Army), responsible for a sector of the Isonzo north of Gorizia. In these circumstances, Grazioli could exploit his familiarity with Lieutenant General Capello, whom he knew from the time spent in the XIII Corps. More specifically, Grazioli received Capello's official blessing to proceed with the project, that, in the meantime, he had already started in an unofficial capacity. *De facto*, Grazioli's proposals were coincidentally meeting Capello's last tactical guidance, calling for further development of the chosen patrols experiment.⁴¹⁵

⁴¹⁴ Di Martino and Cappellano, *The Italian Assault Units in the Great War (1915-1918)*, 1:30-33.

⁴¹⁵ *Ibid.*, 1:31, 36-37.

The Lambro Brigade took part in the Sixth Battle of the Isonzo (August 4 to August 17, 1916), together with other units of the Third Army. The primary sources available do not specify if the special platoons were effectively involved in this offensive. Nonetheless, Grazioli's efforts and initiative in the study of new solutions for trench warfare gave him a reputation as an expert and a reliable officer in these matters. For this reason, Major General Gaetano Giardino, Commander of the 48th Division (VIII Corps, Second Army), assigned to Grazioli the task to assess a memorandum prepared by Major Giuseppe Bassi, Commanding Officer of the 3rd Battalion, 150th Infantry, Taranto Brigade (the other tactical unit of the 48th Division), concerning innovative techniques to employ the submachine gun section in battle.⁴¹⁶

Bassi was a career infantry officer, a veteran of a long deployment to Libya from 1911 to April 1916. During his year-long experience on the Italian Front, Bassi had commanded an infantry battalion in combat, obtaining excellent results in the Sixth Battle of the Isonzo.⁴¹⁷ Similarly to Grazioli, Bassi had realized that a drastic change in tactics was the only way to cope with the challenges of trench warfare. For this reason, he had prepared a memorandum titled *Establishment and employment of the submachine gun*

⁴¹⁶ The Lambro Brigade had been moved from the 24th to the 48th Division in October 1916. Di Martino and Cappellano, *The Italian Assault Units in the Great War (1915-1918)*, 1:38-39. See also Pirocchi, *The Arditi*, 21; Rochat, *The Arditi of the Great War*, 35.

⁴¹⁷ Farina, *The Italian Assault Troops*, 56-57.

seCTIONS (Costituzione ed impiego delle sezioni pistole mitragliatrici), submitted to his superiors on November 6, 1916.⁴¹⁸

In his study, Bassi followed the line previously drafted by Grazioli, suggesting the creation of special units predominantly focused on the penetration and disruption of the enemy defensive system. The new concept revolved around the dynamic employment of the submachine gun to fill the gap left by the heavy machine guns in providing close support to the infantry during the assault.⁴¹⁹ Moreover, Bassi's TTPs did not discard the importance of heavy machine guns, but rather allowed the integration of automatic weapons of a different caliber. The role of the submachine guns was to accompany and support the assaulters to the objective, providing an immediate fire platform to consolidate on it. In the meantime, the heavy machine guns suppressed any relevant target of opportunity from behind the attacking unit and, once the target was taken, displaced forward to interdict any enemy counterstroke.

Furthermore, Bassi's study also sketched the main organizational and employment criteria of these new units. First, the memorandum specified the sections' strength and composition, following the principle of specialization of roles. The section comprised a 12-man gunnery squad and a 14-man ammunition bearing squad. Every

⁴¹⁸ Di Martino and Cappellano, *The Italian Assault Units in the Great War (1915-1918)*, 1:37-38.

⁴¹⁹ Bassi proposed to remove the protective shield that alone weighted 26 kilograms (57 pounds) and to devise a special bipod that allowed a soldier to operate the weapon from every position, either stationary or the move. In this way, the submachine arrived at a maximum weight of 21 kilograms (46 pounds), including the ammunition box, responding to the handling criteria proper of a dynamic employment of this weapon. Di Martino and Cappellano, *The Italian Assault Units in the Great War (1915-1918)*, 1:39.

squad was organized on two six-man teams. To achieve reasonable results, each battalion should have activated two sections, for a total of 12 for an entire brigade. Second, Bassi's pamphlet brought forward the necessity to allocate a specific set of equipment and armament to these outfits, including musket, dagger, and grenades. Finally, the study outlined the main norms for the employment of submachine gun units. These included the spearheading of infantry formations and the neutralization of critical enemy defensive elements through flanking or envelopment maneuver.⁴²⁰ Overall, Bassi's memorandum portrayed the embryonic form of the modern infantry squad, retaining sufficient firepower and assault power to develop maneuver at the lowest levels of employment.⁴²¹

As already mentioned, on November 8, 1916, Major Bassi submitted his proposal along his chain of command. The study quickly got to the attention of Major General Giardino. After careful examination, he shared the document with Grazioli (promoted in August 1916 to major general). Grazioli, in turn, studied Bassi's idea and used it to perfect the concept of the special platoons. On March 7, 1917, Grazioli ordered the enlargement of the already existing regimental platoons to the company level, incorporating one 40-man platoon drafted from every infantry company. At a later stage, he also envisaged the possibility of aggregating the two companies (one for each regiment) under a special battalion or assault battalion, reinforced with two heavy machine gun sections taken from the subordinate regiments and all the submachine guns

⁴²⁰ Di Martino and Cappellano, *The Italian Assault Units in the Great War (1915-1918)*, 1:39-40. See also Farina, *The Italian Assault Troops*, 65-71.

⁴²¹ Di Martino and Cappellano, *The Italian Assault Units in the Great War (1915-1918)*, 1:40.

at that moment available in the brigade.⁴²² Furthermore, in March 1917, Grazioli mandated the construction of a training site in the vicinity of Russig (Gorizia), comprising multiple ranges and trench mock-ups of various types.⁴²³

At the beginning of 1917, Grazioli's special platoons conducted their initial documented missions on the Isonzo front. First, in February 1917, these units executed a raid and a counter-attack in the sector of Belpoggio (north-east of Gorizia). Second, on May 14, during the Tenth Battle of the Isonzo, special platoons from both the 205th and 206th Infantry Regiments (Lambro Brigade component units) spearheaded the attacks of their parent formations. This last experiment had good results, as related to the penetration of the enemy defenses and the attainment of the initial objectives. However, the special platoons were subsequently repelled by swift Austrian counterstrokes, supported by a heavy artillery barrage.⁴²⁴

Overall the first combat test gave encouraging signs, at least from Grazioli's perspective. Nominated commander of the 48th Division on May 11, 1917, he authorized the establishment of a provisional company in Russig on the very next day. This experimental unit comprised four special platoons, one heavy machine-gun section, and one 65-millimeter mountain cannon section drafted from the division artillery elements.

⁴²² Di Martino and Cappellano, *The Italian Assault Units in the Great War (1915-1918)*, 1:40-42.

⁴²³ The village of Russig was also known as Russiz. Today, this hamlet has the name of Capriva del Friuli. Di Martino and Cappellano, *The Italian Assault Units in the Great War (1915-1918)*, 1:42. See also Pirocchi, *The Arditi*, 21.

⁴²⁴ Di Martino and Cappellano, *The Italian Assault Units in the Great War (1915-1918)*, 1:42-45.

Grazioli entrusted the command of his new creation to Major Bassi, who, in June 1918, was promoted to the rank of lieutenant colonel. During the following two weeks, this officer further developed and perfected the assault TTPs initially proposed. Moreover, he organized a series of training exercises that culminated in a demonstration held on June 25, 1917, at the presence of Major General Grazioli and Lieutenant General Capello (now Commander of the Second Army). The results were so good that General Capello immediately wrote a report to the Army Supreme Command. This was the culminating event that paved the way for the publication of the Supreme Command's circular no. 111660, dated June 26, 1917, that authorized the *Arditi* units as Assault Troops (*Truppe d'Assalto*).⁴²⁵

Before moving further, as previously anticipated, it is critical to briefly outline the development of the Supreme Command's approach from the beginning of the war to June 1917. Analyzing the perspective of the Italian senior military leadership is useful to understand why the Supreme Command actively supported the creation and the growth of the assault units. Furthermore, to complete the picture, it is appropriate to assess the role of the Austrian *Sturmtruppen* concept in the gestation of the *Arditi*.

Like many other military organizations, the Italian Army entered the war with an unshakable faith in the frontal attack. The circular *Frontal attack and tactical guidance* (*Attacco frontale e ammaestramento tattico*), issued by General Luigi Cadorna, Chief of Staff of the Army, on February 25, 1915, is a testament of the doctrinal orientation of the

⁴²⁵ Di Martino and Cappellano, *The Italian Assault Units in the Great War (1915-1918)*, 1:45-46. See also Farina, *The Italian Assault Troops*, 71-72; Pirocchi, *The Arditi*, 21; Rochat, *The Arditi of the Great War*, 35.

time. This document emphasized the same principles and procedures already explained in the second chapter of the present study. Of note, this document did not envisage any use of independent and specialized units in the overall scheme of the offensive operations.

The study of the lessons identified in the first months of the war highlighted the inadequacy of the Italian military instrument to cope with the challenges of modern warfare, especially in the context of trenches. These findings triggered a series of efforts to adjust the Italian Army's capabilities, later culminating in a drastic reorganization promoted by General Armando Diaz, new Chief of Staff of the Army after the debacle of Caporetto.⁴²⁶

The first signs of change emerged in November 1915 with the directive no. 1086 *General norms for winter operations (Norme generali per l'inverno)*. In this document, the Army Supreme Command introduced the idea of "small operations," conducted by chosen elements at the low tactical level to maintain the initiative on the enemy. The execution of small unit raids against the Austrian defensive outposts had two purposes. First, it aimed at exercising constant pressure on the enemy, so containing his offensive activities. Second, this guidance intended to avoid the perception that the Italian troops limited their actions to a "passive vigilance" of the assigned positions. Unfortunately, at a general level, this set of instructions fell on deaf ears.

During the winter between 1915 and 1916, the Austrian troops maintained almost exclusive control of the operational tempo, performing a wide variety of local attacks, most of which were successful. These outcomes were partially due to the lack of proper

⁴²⁶ Di Martino and Cappellano, *The Italian Assault Units in the Great War (1915-1918)*, 1:46, 118. See also Morisi, *Hell in the Trenches*, 73-80, 257-260.

equipment and suitable preparation in the Italian ranks. Nonetheless, in January 1916, General Cadorna recalled the attention of his subordinate commanders to the importance of executing small unit offensive actions, along all the front line and countering every enemy with swift counter-attacks. Most likely, the emphasis of the Army Chief of Staff had some sort of positive influence on all the local initiatives envisaging the creation of specialized reconnaissance units in early 1916, previously illustrated at the beginning of this section.⁴²⁷

The next milestone of the Italian Supreme Command's progression of initiatives, aimed at adapting to the reality of trench warfare, is the directive *Employment criteria of the infantry in trench warfare (Criteri d'impiego della fanteria nella guerra di trincea)*, issued on July 10, 1916. This comprehensive document provided updated guidance on the themes of the organization of the Italian trench duties and combat in trench warfare, drawing from the experiences that had evolved until that moment. On the one hand, this circular regularized the procedures of the field armies and corps concerning the employment and rotation of troops in the trenches along the Italian Front. Of note, it introduced some critical changes, such as an in-depth echeloning of the units manning the trenches, with a precise ratio of the elements dedicated to vigilance and the ones held in reserve.

⁴²⁷ Di Martino and Cappellano, *The Italian Assault Units in the Great War (1915-1918)*, 1:46-48.

The Army Supreme Command's emphasis on enacting aggressive counter-attacks to repel any enemy penetration attempt⁴²⁸ coincided with one of the tasks Grazioli envisaged for his special platoons.⁴²⁹ Later, the counter-attack would also become one of the secondary tasks of the assault units.⁴³⁰ In 1918, the revisionist efforts of General Diaz would have completed the adoption of a zonal defense system fully comparable with the German elastic defense in depth.⁴³¹

On the other hand, the Supreme Command delved into the topic of "small trench actions" (*piccole azioni di trincea*), most likely in the attempt to rekindle the aggressive spirit and the initiative of the Italian forces. Similar to what posited for winter operations, the Italian commanders at all echelons were encouraged to plan and conduct frequent raids and attacks with limited objectives against the enemy positions. The purpose was to harass the adversary, take prisoners, collect information, and adjust the front line as needed. Without a doubt, the initiatives of General Capello and General Grazioli were in line with this set of guidelines. However, it is clear that the Italian Army still lacked a

⁴²⁸ Di Martino and Cappellano, *The Italian Assault Units in the Great War (1915-1918)*, 1:48-50.

⁴²⁹ *Ibid.*, 1:31-32, 44.

⁴³⁰ Whereas the first assault battalions were predominantly focused on offensive operations, such as raids or the spearheading of large-scale attacks, in 1918, with the creation of the Assault Corps and the Assault Divisions (explained later in the chapter), the Italian shock troops assumed the secondary orientation to conduct counter-attacks or other similar counteroffensive tasks. Di Martino and Cappellano, *The Italian Assault Units in the Great War (1915-1918)*, 1:189.

⁴³¹ Morisi, *Hell in the Trenches*, 192-194.

general and comprehensive document on this theme. The authorization of the assault troops and the definition of a specific set of TTPs for them would later fill this gap.⁴³²

During the Great War, the Army Supreme Command also relied on rewards and decorations in the attempt to revitalize the Italian soldier's initiative and aggressiveness. First, the Supreme Command standardized the procedure to concede money bonuses or extraordinary leave for the personnel that committed acts of valor duty. The circular *Money and leave rewards for acts of valor (Premi in denaro e licenze per atti di valore)*, dated October 9, 1915, aligned all the initiatives spreading more and more at the army and corps levels. Furthermore, in May 1916, the Supreme Command introduced similar bonuses to reward the capture of enemy personnel and weapons.⁴³³

The next step of this process, aimed at shaking down the state of passivity caused by trench duty, was the establishment of a "badge for audacious soldiers" (*distintivo per militari arditi*) on August 15, 1916, with Circular no. 15810, *Norms for the bestowal of the badge for audacious soldiers (Norme per la concessione del distintivo per militari arditi)*. This type of official recognition included the authorization to wear a specific badge on the uniform and was granted to soldiers that volunteered for and completed particular assignments, such as breaching enemy obstacles, risky reconnaissance actions, climbing steep mountains, or crossing glaciers for operational purposes. In the Supreme Command's scheme, the recipients of this badge were to become an example for their comrades and a reference for their commanders.

⁴³² Di Martino and Cappellano, *The Italian Assault Units in the Great War (1915-1918)*, 1:50-51.

⁴³³ *Ibid.*, 1:51-52.

Overall, this circular sanctioned the introduction of the word “*Ardito*” in an official capacity, as the soldier in possession of peculiar skills that voluntarily executed particularly risky actions. It is important to underscore that this innovation involved only the individual, not hinting at all to the creation of units composed by courageous individuals, the *Arditi*, as it happened later in June 1917. It is interesting to notice how the initiatives of certain commanders, such as Grazioli and Capello, focused on special units unofficially incorporating this kind of soldiers, were in line with the Supreme Command’s developmental approach.⁴³⁴

The last point to consider, before moving to the description of the history of the assault units proper, is the role of the Austrian *Sturmtrupps* concept, derived from the German *Stosstrupptaktik*.⁴³⁵ In 1916, the Austro-Hungarian Army developed its version of assault units: assault patrols at the company level (*Sturmpatrouillen*) and special assault companies for the mountain troops (*Hochgebirgs-kompanien*). Later, in the fall of 1917, the Austrian Army Supreme Command (*Armeeoberkommando* or AOK) activated assault battalions at the divisional level (*Sturmbataillone*).

The reason for this choice was twofold. On the one hand, as the other European military organizations, the AOK was looking for suitable solutions to break the *impasse* dictated by trench warfare. On the other hand, the Austrian Supreme Command was looking for new methods to harness the offensive potential of the new young recruits

⁴³⁴ Di Martino and Cappellano, *The Italian Assault Units in the Great War (1915-1918)*, 1:52-53.

⁴³⁵ Gudmundsson, *Stormtroop Tactics*, 88.

arriving at the front line at the beginning of 1916.⁴³⁶ The Austrian *Sturmtrupps* concept sprouted from the evolution of the first army assault detachments developed on the Eastern Front, to counter the Russian *Jagdkommando* (Hunting Commandos) formations and grew under the influence of the German *Sturmtrupps* model.⁴³⁷ The AOK oriented its assault units to offensive and reconnaissance tasks. Albeit the command had the project of developing an instructional role similar to the German assault formations, it was never able to do it, due to the lack of resources.⁴³⁸

The Italian Army Intelligence gathered the first significant pieces of information on the Austrian *Sturmtrupps* in January 1917 from the interrogations of prisoners of war. By March 1917, the Italian Supreme Command had a clearer picture of this outfit, because the Central Powers' press had started a propaganda campaign exalting the military achievements of those units. Overall, the Austrian assault troops conducted numerous operations along the Italian Front between the end of 1916 and the beginning of 1917, scoring a wide array of successes.⁴³⁹ This situation induced the Italian Supreme

⁴³⁶ Morisi, *Hell in the Trenches*, 44-45, 48, 61-62. The Austro-Hungarian *Sturmbataillone* were also called *Sturmbaonen*. This last word is an abbreviated form of the first expression.

⁴³⁷ Since September 1916, Austrian officers and NCOs regularly took part in courses of instructions held by German assault units. Moreover, in November 1916, each of the German assault battalions on the Eastern front incorporated one Austro-Hungarian assault company. These exchanges facilitated the spread of German-instructed personnel throughout the entire Austrian Army. Morisi, *Hell in the Trenches*, 46. See also Gudmundsson, *Stormtroop Tactics*, 88.

⁴³⁸ Morisi, *Hell in the Trenches*, 47-48.

⁴³⁹ Di Martino and Cappellano, *The Italian Assault Units in the Great War (1915-1918)*, 1:55-57.

Command to emanate a directive, no. 6230, dated March 3, 1917, summarizing all the information available concerning the organization, training, and tactics of the Austrian *Sturmtrupps*. General Cadorna intended to give his subordinate commanders the means to counter this threat, but he also wanted to encourage the adoption of the Austrian TTPs at the first opportunity. This idea further flourished with the Supreme Command's decision to establish specialization courses on the use of grenades and machine guns for all infantry formations. In this respect, the directive no. 2540, *Specialization of the infantry tasks* (*Specializzazione dei compiti della fanteria*), published in January 1917, responded to the lack of a suitable preparation of the Italian soldiers, acknowledged by Cadorna at the end of 1916.⁴⁴⁰

The rise of the Austrian *Sturmtrupps* on the Italian Front generated two effects. On the one hand, this corroborated Cadorna's ideas regarding the necessity to train the Italian soldiers better.⁴⁴¹ On the other end, the new Austrian threat encouraged the flourishing of a wide number of specialized units throughout the Italian Army, with modalities, training programs, and numbers decided at the field army and corps level. The elements selected for these formations were inappropriately called "Arditi." For the most part, these men came from the ranks of the soldiers awarded with an *Ardito* badge and from the reconnaissance platoons that in most cases, were disbanded. Lacking a common

⁴⁴⁰ Di Martino and Cappellano, *The Italian Assault Units in the Great War (1915-1918)*, 1:56-57.

⁴⁴¹ *Ibid.*, 1:57.

set of regulations, the definition of their training, equipment, and TTPs was done at the local level and in a rather irregular way.⁴⁴²

In essence, the first months of 1917 represented a period of gestation for the concept of assault units in the Italian Army. In this time frame, the additive effects of the gradual reforms promoted by the Supreme Command, the individual initiatives of certain officers, and the advent of the Austrian *Sturmtrupps* converged in the ultimate officialization of the assault battalions with the Circular no. 111660 of June 26, 1917. When Cadorna learned of the good result of the exercise of Bassi's experimental company of June 25, he was finally convinced to continue with the project of independent assault units. Besides, Cadorna was able to see with his own eyes the excellent results attained by Bassi during another exercise conducted in Russig on July 19.⁴⁴³ This point is important because, until then, Cadorna had been very reluctant to endorse the establishment of permanent special units, which he saw as unreliable and uncontrollable elements.⁴⁴⁴

Before moving on, an important question is: how much did the Austrian *Sturmtrupps* concept influence the further evolution of the *Arditi*? According to historian Giorgio Rochat, this idea responded to the Supreme Command's necessity to improve the training standards of the infantry and rekindle the aggressiveness of the Italian soldier.

⁴⁴² Di Martino and Cappellano, *The Italian Assault Units in the Great War (1915-1918)*, 1:57-62. See also Pirocchi, *The Arditi*, 21.

⁴⁴³ Di Martino and Cappellano, *The Italian Assault Units in the Great War (1915-1918)*, 1:46, 58.

⁴⁴⁴ *Ibid.*, 1:63.

The availability of shock troops that could spearhead the conventional units' assaults and provide a source of inspiration in battle was, without a doubt, appealing to the Italian senior leadership. Furthermore, the *Sturmtruppen* concept introduced an initial model regarding organization, training, and equipment. Besides, the Austrian solution did not yield anything extraordinary for the time, rather incorporating a set of practical measures dictated by the evolution of warfare up to that moment.⁴⁴⁵ In addition, the Supreme Command's awareness of the threat represented by the Austrian storm troops paved the way for the final approval of the Italian assault battalions, even accelerating their development. The establishment of the *Arditi* battalions as independent and permanent units must not pass as an ordinary development. Never had the Italian senior leadership allowed the transformation of local initiatives regarding special units into centrally approved and regularized Army concepts.⁴⁴⁶

Apart from the above-listed points, the Italian assault battalions developed rather differently from the Austrian *Sturmtruppen*. Upon their onset, the *Arditi* were organized as a separate arm of the infantry, with their own training methods, equipment, a unique esprit de corps, and an "autonomous role" in battle. On the Austrian side, instead, the assault units were an essential part of the infantry branch, necessary to lead the attack of an army that was increasingly "tired" of the war. Finally, considering the TTPs of both units, they did not differ much, as could be anticipated for two armies that fought in close

⁴⁴⁵ Rochat, *The Arditi of the Great War*, 31.

⁴⁴⁶ Di Martino and Cappellano, *The Italian Assault Units in the Great War (1915-1918)*, 1:57, 63.

contact for a long time. Besides, as underscored by Rochat, the successful deeds of the *Arditi* influenced, in turn, the Austro-Hungarian assault tactics later in the war.⁴⁴⁷

Having shed some light on the process of evolution of the assault battalions in the Italian Army, it is now possible to consider how the *Arditi* further grew and fought during the rest of World War I. After the emanation of the circular *Assault Battalions* (June 26, 1917), every army scrambled to comply with the Supreme Command's order in different ways, dictated by the resources available and the situation of their specific sector of the front. Considering the lack of specificity of the above-mentioned document,⁴⁴⁸ the various armies adopted different solutions, especially regarding the organizational structure of the new outfits.⁴⁴⁹

At the beginning of July, the Army Supreme Command integrated its guidance with two further directives. The first, *Treatment entitled to the personnel of the assault battalions* (*Trattamento spettante al personale dei riparti d'assalto*), gave clear indications concerning billeting and training areas, administrative considerations (including the compensation of a bonus pay) and the employment instructions. Moreover,

⁴⁴⁷ Rochat, *The Arditi of the Great War*, 29-32.

⁴⁴⁸ The directive *Assault Battalions* prescribed the creation of an assault unit for each army, for the Carnia Zone Command and the III Army Corps (independent corps), of the strength of at least one company, with volunteer personnel preferably drafted from *Bersaglieri* units. The idea was to gradually build every formation and ultimately take it to battalion strength. Even if the Supreme Command had a rather solid sketch of the desired table of organization and equipment, this was not attached to the initial circular. The intent of that was to let every corps conduct an individual experimentation, leading to a series of proposals and considerations to be forwarded by mid-July. Di Martino and Cappellano, *The Italian Assault Units in the Great War (1915-1918)*, 1:65.

⁴⁴⁹ *Ibid.*, 1:69.

this order specified the necessity to exempt the members of this unit from any type of duty or additional service, so to have them completely focused on training.⁴⁵⁰

The second, *Training of the assault battalions (Addestramento dei reparti d'assalto)*, outlined the main objectives for the initial training period, including also a sort of mission essential task list that included the conduct of raids, attacks with limited objectives and the spearheading of conventional formations in large-scale attacks. This document presented a significantly innovative principle requiring the units to structure the training in a “general instruction” program and a “special instruction” one. The first aimed at preparing the individual soldier on the physical level and the technical matters tied to his specific role in the unit. The second dictated the execution of comprehensive live-fire exercises simulating real operations. The purpose of that was to lead every soldier to understand how his actions fit in the overall picture. Furthermore, the training regimen was to be characterized by intensity, realism, and continuity.⁴⁵¹

The last guidance, which is meaningful to cite, is entitled *Equipment, Armament and Organizational Structure of the Assault Battalions (Equipaggiamento, armamento e composizione organica dei reparti d'assalto)*, dated September 18, 1917. Drawing upon the observations reported by each army in the previous three months, this document defined the battalions’ tables of organization and equipment. First, the battalions drafted their members primarily from the specialties of the infantry branch, and the new units retained a connotation depending on the origins of the soldiers composing it. More

⁴⁵⁰ Di Martino and Cappellano, *The Italian Assault Units in the Great War (1915-1918)*, 1:66.

⁴⁵¹ *Ibid.*, 1:66-67.

specifically, the *Arditi* wore “Black Flames” flashes if their majority came from the infantry, “Crimson Flames” flashes if it came from *Bersaglieri* units, and “Green Flames” if it came from *Alpini* troops.⁴⁵² In light of their specialization in mountain warfare, the “Green Flames” developed innovative techniques to conduct raids in mountainous environments, employing climbing and skiing techniques.⁴⁵³ There were also “mixed battalions” that incorporated a company for each infantry specialty of the Italian Army.⁴⁵⁴

Second, every unit was composed of three assault companies (also called musketeer companies) and one mortar section (six weapons). Every company was structured on four platoons (three squads), one submachine gun sections (four weapons), one heavy machine gun section (two weapons), and one flamethrower section (four weapons). In reality, in 1917, most of the assault units tended to follow a slightly different model developed by Lieutenant Colonel Bassi, which was more effective in combat (explained later in the chapter). This occurred because the Supreme Command

⁴⁵² The Supreme Command forgot to include the “Green Flames” from the initial draft, but corrected this shortcoming with an amendment some days later. Di Martino and Cappellano, *The Italian Assault Units in the Great War (1915-1918)*, 1:86.

⁴⁵³ Paolo Morisi, *Fiamme Verdi: I Reparti d'Assalto Alpini nella Prima Guerra Mondiale (Adamello-Val Lagarina-Monte Pasubio-Monte Grappa-Altopiano dei Sette Comuni)* [*Green Flames: the Alpini Assault Battalions in the First World War (Mount Adamello-Lagarina Valley-Mount Paubio-Mount Grappa-Sette Comuni Plateau)*] (Caselle di Sommacampagna, Italy: Cierre Grafica, 2012), 23.

⁴⁵⁴ *Ibid.*, 5-6.

specified that its indications regarding the battalions' force structure were not rigid, but could be adapted depending on the situation.⁴⁵⁵

Last, the above-mentioned directive defined the assault company as the minimal authorized capacity, so excluding the possibility for the conventional battalions to retain organic *Arditi* platoons. The idea behind this was to safeguard the generic infantry formations, avoiding an excessive draining of qualified and competent personnel.⁴⁵⁶

Nonetheless, all the infantry regiments continued to employ the soldiers with some sort of special qualification (but not ceded to the assault battalions) in regimental *Arditi* platoons formed for specific missions.⁴⁵⁷

Overall, the history of the *Arditi* in the First World War encompasses six fundamental phases. The first includes the time window between the official inception of the assault battalions (June 26, 1917) and the beginning of the Caporetto rout (October 24, 1917). In this stage, every army developed its own assault outfits and the *Arditi* units received their baptism of fire. The second phase regards the employment of assault battalions during the withdrawal following the Austrian breakthrough near Caporetto and in the ensuing battle to consolidate the Italian line along the Piave River (October 24–November 19, 1917). The third period, from November 1917 to January 1918, entails an initial reorganization of the assault battalions, that fit in the framework of the Italian

⁴⁵⁵ Di Martino and Cappellano, *The Italian Assault Units in the Great War (1915-1918)*, 1:86-87.

⁴⁵⁶ Di Martino and Cappellano, *The Italian Assault Units in the Great War (1915-1918)*, 1:86-87.

⁴⁵⁷ *Ibid.*, 1:132.

Army reconstruction led by General Armando Diaz (the new Italian Commander in Chief), after the failure of Caporetto.

The fourth phase, from February 1918 to June 1918, implies further changes in the organizational structure of the *Arditi*, with the introduction of the innovative concept of the Assault Corps and Assault Divisions. Moreover, in this time window, the assault battalions executed a wide array of raids and attacks with limited objectives and took part in the defensive battle called “Battle of the Solstice” (June 15–24, 1918).

The fifth stage comprises the operational activities of the assault battalions from July to the end of October 1918, in the attempt to keep pressure on the Austro-Hungarian Army after the Battle of the Solstice and set the conditions for the final offensive of Vittorio Veneto. The last phase includes the battle of Vittorio Veneto (October 24–November 3, 1918), the end of the war, and the final disbandment of the *Arditi* units.⁴⁵⁸ For the sake of clarity and synthesis, the illustration of the history of the Italian units presented in this paper will follow the above-mentioned steps.

⁴⁵⁸ This categorization of the history of the *Arditi* is posited by the historian Paolo Morisi with specific reference to the “Green Flames” units. However, it is possible to use it also for the rest of the assault units, that underwent the same evolutionary path, with identical timings. Morisi, *Green Flames*, 8-10.

Table 3. History of the *Arditi* Units-Main Phases

Phase	Period	Significant events
first phase	from June 26 to October 23, 1917	<ul style="list-style-type: none"> • activation of the assault battalions • first employment in combat of the assault battalions
second phase	from October 24 to November 19, 1917 (retrograde of Caporetto and consolidation of the defense along the Piave River)	employment of the assault battalions during the retrograde following the Austro-German offensive of Caporetto
third phase	from November 20, 1917, to the end of January 1918	first reorganization of the <i>Arditi</i> units
fourth phase	from February to June 1918	<ul style="list-style-type: none"> • second reorganization of the <i>Arditi</i> units, creation of the Assault Corps and the Assault divisions • execution of a wide array of raids and attacks with limited objective along the Italian Front • employment of the assault units in the “Battle of the Solstice”
fifth phase	from July to October 1918	operational activities of the assault battalions in preparation of the final offensive of Vittorio Veneto
sixth phase	from October 24 to February 1921	<ul style="list-style-type: none"> • employment of the assault units in the offensive of Vittorio Veneto • end of the war and beginning of the demobilization • employment of the <i>Arditi</i> in Libya • employment of the <i>Arditi</i> in Albania • end of the demobilization of the <i>Arditi</i>

Source: Created by the author, taking inspiration from the method used by the historian Paolo Morisi with specific reference to the “Green Flames” units. Paolo Morisi, *Fiamme Verdi: I Reparti d'Assalto Alpini nella Prima Guerra Mondiale (Adamello-Val Lagarina-Monte Pasubio-Monte Grappa-Altopiano dei Sette Comuni)* [*Green Flames: the Alpini Assault Battalions in the First World War (Mount Adamello-Lagarina Valley-Mount Paubio-Mount Grappa-Sette Comuni Plateau)*], (Caselle di Sommacampagna (VR), Italy: Cierre Grafica, 2012), 8-10.

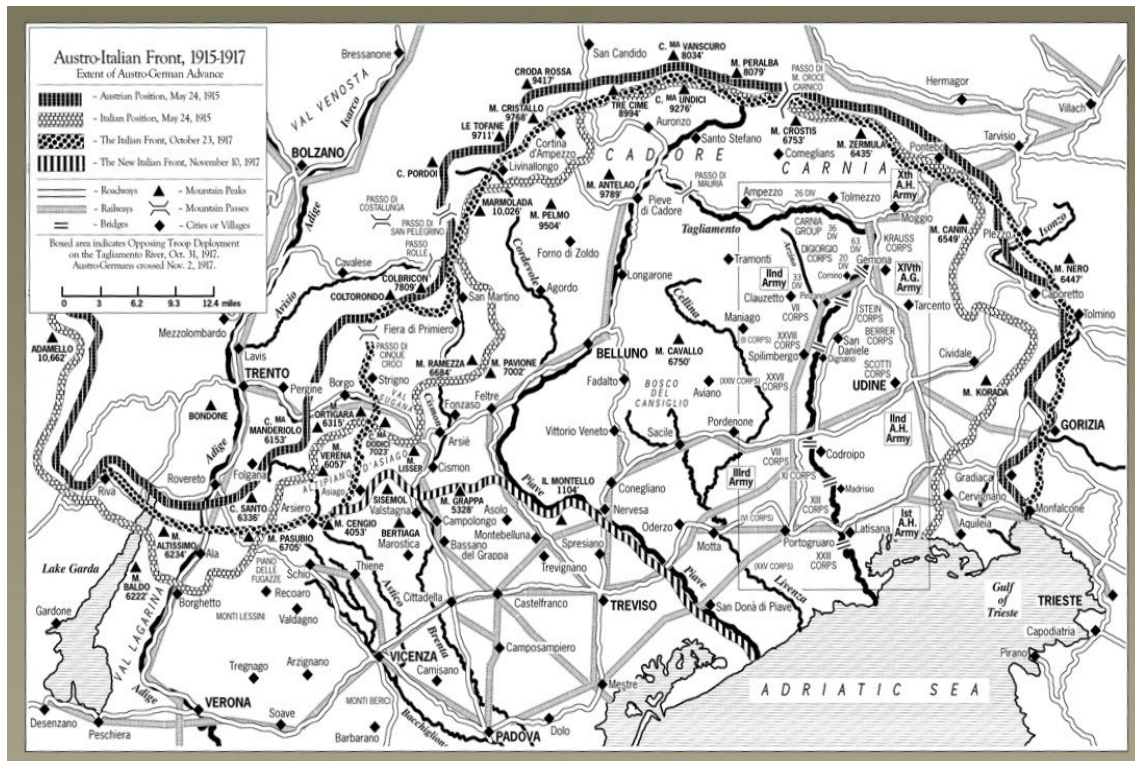


Figure 9. Austro-Italian Front, 1915-1917: Extent of the Austro-German Advance

Source: Gaetano Cavallaro, “Austro-Hungarian World War I War Zone,” WorldWarOneHistory, accessed May 2, 2020, http://www.worldwaronehistory.com/Austro_Hungarian_WWI_War_Zone.html.

NOTE: This map has the function of providing a source of reference for the various locations in the Italian Front mentioned later in the description of the history of the *Arditi*.

During the first phase, every unit at the army echelon, including also the Carnia Zone Command and the III Army Corps (independent command), established and developed their own assault units, as directed by the Supreme Command, arriving at a total of 23 battalions in various stages of readiness at the end of October 1917.⁴⁵⁹ The

⁴⁵⁹ It is important to precise that the reported number of 23 outfits is merely an approximation. As posited by Rochat, it is impossible to determine the exact numbers of battalions activated before the Caporetto debacle, because of the contrasting information in the few primary sources available and the continuous reorganization measures enacted by the commands at the various echelons in the first months of official service of the

analysis provided by this paper will focus on the initiatives of the Second Army, that, by its previous experimentations (General Grazioli and Lieutenant Colonel Bassi), was the most prolific and effective. The Second Army *de facto* established a model that most of the other units would have followed.⁴⁶⁰

At the end of July 1917, the Second Army experimental unit, under the lead of Lieutenant Colonel Bassi, moved from Russig to Sdricca di Manzano (Udine). This new location was more suitable for the activities of the new outfit. It had enough space to build a training complex, including multiple firing ranges, entrenchment mock-ups, and maneuver areas to conduct drills.⁴⁶¹ The proximity of the army aviation squadron of Oleis (Udine) and the 6th Transportation Unit (under the Second Army and based in Manzano, Udine) was a factor in the choice of this location. Both units were assigned in direct support of the assault battalion of the Second Army to provide aerial reconnaissance and transportation capabilities.⁴⁶²

The new school received a section of 58-millimeter mortars to support his activities and an electrical searchlight for the execution of low visibility exercises during the night. The school of Sdricca became the most renowned “instructional camp” (*campo*

Arditi units. Nonetheless, it is likely that the total number of battalions was higher than 20. Rochat, *The Arditi of the Great War*, 15-16, 53.

⁴⁶⁰ Di Martino and Cappellano, *The Italian Assault Units in the Great War (1915-1918)*, 1:87. See also Rochat, *The Arditi of the Great War*, 36-37; Pirocchi, *The Arditi*, 21-22.

⁴⁶¹ Di Martino and Cappellano, *The Italian Assault Units in the Great War (1915-1918)*, 1:75-77.

⁴⁶² Farina, *The Italian Assault Troops*, 74, 94.

d'istruzione) of the Italian assault units. First, here Bassi continued to refine the *Arditi* concept under the organizational, materiel, and doctrinal point of view, experimenting with 65-millimeter mountain cannons and flamethrowers. Second, he also supervised the training of the incoming recruits, progressively increasing the cohort of qualified personnel of the battalion.⁴⁶³ Third, on the behest of the Supreme Command, the school offered a two-week course for the superior officers of the other field armies responsible for following the development of the assault units.⁴⁶⁴

The innovative training and tactical methods devised by Bassi were, in this way, exported to the schools established by the other armies and elements subordinate to the Supreme Command. More precisely, the Third Army activated its own instructional camp in Borgnano (Gorizia), and the Fourth Army did the same in Zortea (Trento).⁴⁶⁵ Fourth, for the rest of 1917, the Sdricca School continued to run one-week courses centered on the new assault techniques to officers and NCOs operating in the unofficial regimental *Arditi* units.⁴⁶⁶ For these reasons, as correctly maintained by Rochat, this school became the “cradle of the *Arditi*.”⁴⁶⁷

⁴⁶³ Di Martino and Cappellano, *The Italian Assault Units in the Great War (1915-1918)*, 1:78.

⁴⁶⁴ Farina, *The Italian Assault Troops*, 74.

⁴⁶⁵ Also the First Army, the Plateaus Troops Command (*Comando Truppe Altipiani*), the III Corps, and the Carnia Zone Command established their own *Arditi* schools, but the primary sources available do not allow to define the exact location of these facilities. Pirocchi, *The Arditi*, 24. See also Rochat, *The Arditi of the Great War*, 51-53.

⁴⁶⁶ Farina, *The Italian Assault Troops*, 75.

⁴⁶⁷ Rochat, *The Arditi of the Great War*, 36.

Considering the development of the operational units, the Second Army was the first to establish its assault battalion from two assault infantry companies, whose activation was authorized by the Supreme Command on July 5, 1917; in essence, the I Assault Battalion was born.⁴⁶⁸ Between August and October 1917, the Second Army further expanded his “arsenal.” First, it reinforced the I Battalion with two additional assault companies (one *Bersaglieri* and one infantry company) and then activated five further assault battalions (II, III, IV, V, and VI), structured on four assault companies.⁴⁶⁹ The table below portrays the situation of the Italian Army assault units on the eve of the debacle of Caporetto.

⁴⁶⁸ Di Martino and Cappellano, *The Italian Assault Units in the Great War (1915-1918)*, 1:71. The assault battalions were designated using roman numerals, as the army corps. The initial Supreme Command’s procedure envisaged the progressive designation of operational units as they were officially activated. In various instances, this method created discrepancies between the Supreme Army’s documents and the armies’ ones, making difficult to exactly track this kind of units. Di Martino and Cappellano, *The Italian Assault Units in the Great War (1915-1918)*, 1:87, 90, 96. See also Rochat, *The Arditi of the Great War*, 15.

⁴⁶⁹ Rochat, *The Arditi of the Great War*, 35-36, 53. See also Di Martino and Cappellano, *The Italian Assault Units in the Great War (1915-1918)*, 1:79, 86, 93-94.

Table 4. Situation of the Assault Battalions in the Italian Army at the end of October 1917

Parent Command	School Location	Assault Battalions
First Army	Somewhere near Vicenza	IV*, IX, XXIII, XXIV
Second Army	Sdricca di Manzano (Udine)	I, II, III, IV*, V*, VI*
Third Army	Borgnano (Gorizia)	XIX, XX, XXI, XXII
Fourth Army	Zortea (Trento)	V*, VI*, VII, VIII
III Army Corps	Somewhere in Valcamonica (Brescia)	XVII
Carnia Zone Command	No information available	XVI
Plateaus Troops Command	Somewhere near Vicenza	XVI

Source: Created by the author with data drafted from Basilio Di Martino and Filippo Cappellano, *I Reparti d'Assalto Italiani nella Grande Guerra (1915-1918)* [*The Italian Assault Units in the Great War (1915-1918)*], Vol. 1 (Rome, Italy: Stato Maggiore dell'Esercito in collaboration with Rodorigo Editore, 2016), 96; Angelo L. Pirocchi, *Arditi: Le truppe d'assalto italiane (1917-1920)* [*The Arditi: The Italian Assault Troops (1917-1920)*], translated by the author (Gorizia, Italy: Libreria Editrice Goriziana, 2011), 24.

NOTE: In the above-reported table, there are three battalions with the same numeral designation (*). It is important to underscore that this is not a typing error. This duplication is an example of the discrepancies in the battalions' designations reported in note 472 of the present study.

The last point worth mentioning regarding the first phase of the history of the *Arditi* units is their baptism of fire. The only units employed in combat before the end of October were the IV Battalion (4th *Bersaglieri* Brigade, First Army) in the battle of Mount Maio (Vicenza) in August 1917; the I and II battalions (Second Army) in the Eleventh Battle of the Isonzo in August 1917, in the battle of Mount San Gabriele

(Gorizia) and in the raid of Madoni (Gorizia) in September 1917;⁴⁷⁰ and the V Battalion (Fourth Army) in the battle of Mount Piana (Belluno) in October 1917.⁴⁷¹ The actions of the Second Army units were the most successful, confirming the validity of the *Arditi* concept. The results of these operations contributed to the rise of a “legend” in the Italian and Austrian ranks alike.⁴⁷² In addition, these battles highlighted some shortcomings that would continue to surface for the rest of the war.⁴⁷³

During the Eleventh Battle of the Isonzo, the I Assault Battalion spearheaded, with two assault companies, the XXIV and XXVII Corps in the wet gap crossing of the Isonzo River to seize the Bainsizza Plateau. Moreover, the battalion supported the 48th Infantry Division (VIII Corps) near Gorizia with another company. In the first case, the 1st and 2nd companies successfully crossed the river in two locations near the village of Auzza (Gorizia) in the period of darkness between August 18 and 19. The *Arditi* formations then assaulted through three echelons of entrenched Austrian positions of Mount Fratta, ultimately seizing them. An intense artillery barrage along all the Isonzo front degraded the Austrian defenses in the days preceding the action proper. A short and intense mortar bombardment covered the advance of the *Arditi* to the crossing points. The battalion’s organic cannon section, reinforced by a second element provided by the

⁴⁷⁰ Di Martino and Cappellano, *The Italian Assault Units in the Great War (1915-1918)*, 1:81-83, 91.

⁴⁷¹ Farina, *The Italian Assault Troops*, 254.

⁴⁷² Di Martino and Cappellano, *The Italian Assault Units in the Great War (1915-1918)*, 1:91.

⁴⁷³ Rochat, *The Arditi of the Great War*, 50.

XXVII Corps and the battalion's organic heavy machine gun section, supported by fire the assaulters. Their task was to neutralize enemy strongpoints and weapon emplacements.

Since the operation was executed in low visibility conditions, the battalion's electrical searchlight was used to mark opportunity targets for the assaulters and the supporting elements. The results were brilliant: 527 prisoners, eight heavy machine guns, and two field artillery pieces captured at the cost of limited losses. Furthermore, the seizure of Mount Fratta, a key terrain for the Italian troops, ensured the further offensive efforts of the XXIV and XXVII Corps in the Bainsizza sector.⁴⁷⁴

On August 19, 1917, at dawn, the 3rd Assault Company of the I Battalion raided the Austrian positions on the slopes of Mount San Marco, in the vicinity of Belpoggio (Gorizia). Following a three-hour artillery barrage, the *Arditi* breached and seized the enemy trenches in a quick and ruthless assault. After that, the assault company repelled numerous Austrian counter-attacks, until they were relieved by follow-on formations in the late afternoon. This action brought the capture of 300 prisoners and many Austrian heavy machine guns.⁴⁷⁵

On September 4, 1917, the 2nd, 3rd, and 4th companies of the I Battalion assaulted the Austrian bastion of Mount San Gabriele. This key terrain feature allowed the control of the valley leading from Gorizia to the Adriatic Sea. The assault companies'

⁴⁷⁴ Farina, *The Italian Assault Troops*, 221-229. Farina, in his account of the battle, mentions that the 1st Assault Company suffered only 20 wounded in action, whereas the 2nd Company sustained an unspecified number of dead and wounded.

⁴⁷⁵ Farina, *The Italian Assault Troops*, 243-235. See also Di Martino and Cappellano, *The Italian Assault Units in the Great War (1915-1918)*, 1:82.

task was to seize the main Austrian strongpoints in three different positions along the slopes of the mountain. Upon mission completion, they were to be relieved by elements of the Arno Brigade (11th Division, VI Corps). After a barrage on the Austrian rear lines that lasted all night, at dawn, the Italian artillery in the sector focused on the San Gabriele positions, enabling the beginning of the attack. The companies assaulted the Austrian trenches in three attack columns, supported by the I Battalion's flamethrower section.

The 2nd Company seized the Austrian positions on the top of Mount San Gabriele in only 45 minutes. However, the Arno Brigade was not able to keep pace, and the Austrian interdiction barrage that followed disrupted its advance towards the positions held by the *Arditi*. Therefore, the assaulters remained alone to repel multiple Austrian counter-attacks until the evening. When the Arno Brigade finally arrived, the control of the top of the mountain had gone back to the Austrians. The results of this battle were 3,127 prisoners (including one general officer and two colonels), 55 heavy machine guns, 26 field artillery pieces, and numerous mortars at the price of 60 *Arditi* killed in action and over 200 wounded in action.⁴⁷⁶

The battles described in the previous paragraphs confirmed the effectiveness of Bassi's methods in breaching and seizing the enemy trenches with quick and violent assaults. However, especially in the case of the battle of San Gabriele, the reported examples highlighted some difficulties in coordinating with follow-on formations. As

⁴⁷⁶ Farina, *The Italian Assault Troops*, 236-248. See also Di Martino and Cappellano, *The Italian Assault Units in the Great War (1915-1918)*, 1:82; Pirocchi, *The Arditi*, 22-23.

posited by Rochat, this flaw was inherent in the decision to establish and develop the *Arditi* as a unit neatly detached from the infantry and used to working alone.⁴⁷⁷

Regarding this issue, Farina reported that Bassi was fully aware of the potential pitfalls of conducting a hastily-conceived operation with other units. For this reason, he had initially proposed to execute the attack using only two assault battalions. Nonetheless, the insistence of the II and VI Corps commanders led General Capello, the Second Army Commander, to change his plans at the very last moment. The two senior officers were indeed interested in retaining the credit sprouting from a potential victory. The comments of Lieutenant Colonel Bassi in his after-action review seem to corroborate this version. On the one hand, he vividly suggested avoiding the combined employment of *Arditi* with conventional formations in the future. On the other hand, he posited that combined planning and rehearsals should precede every operation of this kind, and they should possibly be conducted in the training facilities of Sdricca.⁴⁷⁸

The previous considerations close the review of the first phase and lead into the second stage: the employment of the assault formations during the debacle of Caporetto.

On October 24, 1917, a combined Austro–German force of 14 divisions, under the German *Fourteenth Army* led by the General Otto von Below, commenced a large-scale offensive on the Isonzo sector of the Italian Front.⁴⁷⁹ This formidable force was able to penetrate the Italian defenses in the vicinity of Caporetto through the skillful and

⁴⁷⁷ Rochat, *The Arditi of the Great War*, 50.

⁴⁷⁸ Farina, *The Italian Assault Troops*, 240-242, 249-251.

⁴⁷⁹ Gudmundsson, *Stormtroop Tactics*, 127, 132.

audacious application of the newly-devised German assault tactics.⁴⁸⁰ After their initial breach, the Austro-German forces were able to push the Italian troops west. On November 19, von Below's forces were successfully contained along the Piave River and, to the north, in correspondence with the Grappa Massif.⁴⁸¹ The rout of Caporetto, also known as the Twelfth Battle of the Isonzo, saw the consolidation of the Italian Front about 150 kilometers to the west and sealed the fate of the Italian Army Chief of Staff, General Luigi Cadorna, replaced by General Armando Diaz on November 8.⁴⁸²

During this infamous chapter of the Italian military history, the assault battalions covered the retrograde of the other Italian units, most of which were completely in disarray, delaying the advancing enemy forces. On October 27, the six assault units of the Second Army were initially deployed near Gorizia, subsequently receiving the order to fall back to the city of Udine (on October 28). Here, the I Battalion was left to block the advance guard of the Austro-German forces. This unit, lacking a full complement of automatic weapons and supplies, was almost completely wiped out, suffering 390 killed and wounded in action. Only the 1st Assault Company was able to break the encirclement, whereas the remaining 70 survivors of the battalion were captured when they exhausted their ammunition. The rest of the Second Army assault units continued to

⁴⁸⁰ Gudmundsson, *Stormtroop Tactics*, 133-137.

⁴⁸¹ Thompson, *The White War*, chap. 25.

⁴⁸² *Ibid.*

cover the retreat of the XXVII Corps and were the last Italian troops to cross the Piave River in the area of Vidor (Treviso) on November 11.⁴⁸³

To the south, the three assault battalions of the Third Army conducted similar deeds, delaying the enemy while they retrograded in good order. In doing that, they suffered huge losses. As an example, the XXII Battalion arrived at the Piave line with only 100 men, out of an initial strength of 800. The outfits of the Fourth Army supported the retreat of their parent unit through the mountainous region of Cadore. Furthermore, these units, together with the battalions of the First Army, responded with fierce counter-attacks to arrest the Austro-German advance around Mount Grappa and the Asiago Plateau.⁴⁸⁴ Overall, the *Arditi* units fought with high effectiveness and discipline, even in a defensive role that was not their primary field of expertise. In these circumstances, the senior Italian commanders failed to properly employ the assault outfits at their disposal, often tasking them without proper information, equipment, and preparation.⁴⁸⁵

The third phase of the history of the *Arditi* starts in the aftermath of Caporetto. Multiple assault battalions had suffered tremendous losses, requiring a considerable amount of resources to be refitted. Furthermore, the units of the Second Army were wrongly accused of severe discipline shortfalls, resulting in acts of violence and looting

⁴⁸³ Di Martino and Cappellano, *The Italian Assault Units in the Great War (1915-1918)*, 1:99-101. See also Rochat, *The Arditi of the Great War*, 59; Pirocchi, *The Arditi*, 23-25.

⁴⁸⁴ Di Martino and Cappellano, *The Italian Assault Units in the Great War (1915-1918)*, 1:98-99. See also Rochat, *The Arditi of the Great War*, 59; Pirocchi, *The Arditi*, 23-25.

⁴⁸⁵ Rochat, *The Arditi of the Great War*, 59-60. See also Pirocchi, *The Arditi*, 26.

on the local population during the withdrawal. The situation could have as well resulted in a premature end of the assault units. The Supreme Command's investigative commission ascertained that these claims were, in fact, false, the result of rumors spread by factions inside the Italian Army, which were hostile to the *Arditi*. The same commission recognized the substantial level of performance showed by the new outfits in the difficult circumstances of the retrograde. Therefore, the new leadership of the Italian Army opted for the immediate reconstitution of the assault units.⁴⁸⁶

The reorganization of the *Arditi* proceeded in multiple steps covering the first half of 1918. In December 1917 and January 1918, the Supreme Command hastily replenished and redistributed the available assets to cope with the requirements deriving from the consolidation of the new front line.⁴⁸⁷ The table displayed below illustrates the situation of the Italian assault battalions at the beginning of January 1918.

⁴⁸⁶ Di Martino and Cappellano, *The Italian Assault Units in the Great War (1915-1918)*, 1:103-104. See also Rochat, *The Arditi of the Great War*, 57-60.

⁴⁸⁷ Di Martino and Cappellano, *The Italian Assault Units in the Great War (1915-1918)*, 1:102-104, 107.

Table 5. Situation of the Assault Battalions in the Italian Army, January 8, 1918

Parent Command	Assault Battalions
First Army	I, II, III (undergoing activation) IV, IX, XVI, XXIII, XXIV
Second Army	X (undergoing activation)
Third Army	XIX, XX, XXI, XXII
Fourth Army	V, VI, VII, VIII
Fifth Army (new addition)	XI, XII, XIII (undergoing activation)
III Army Corps	XVII

Source: Created by the author using data from Basilio Di Martino and Filippo Cappellano, *I Reparti d'Assalto Italiani nella Grande Guerra (1915-1918)* [*The Italian Assault Units in the Great War (1915-1918)*], Vol. 1, (Rome, Italy: Stato Maggiore dell'Esercito in collaboration with Rodorigo Editore, 2016), 107-108.

In terms of operational activities, this phase saw the participation of the assault units in the activities of stabilization of the Italian Front, especially around Mount Grappa and the Piave River.⁴⁸⁸ There are three episodes worthy of note. First, between December 14 and 16, 1917, the remainder of the Third Army assault battalions (XIX, XX, XXI, and XXII) repelled four consecutive Austrian attacks near Cavazuccherina (today known as Jesolo, near Venice). Their intervention was critical in thwarting the Austrian attempt to seize the city of Venice.⁴⁸⁹ Second, on January 19, 1918, two platoons of “Green Flames” of the XXIX Battalion conducted a successful raid against the Austrian strongpoint of Sano (between Mount Altissimo and Rovereto). They used specific winter

⁴⁸⁸ Farina, *The Italian Assault Troops*, 282-284.

⁴⁸⁹ *Ibid.*, 282.

camouflage and acted without the preparatory barrage of the artillery of that sector. In this way, the *Arditi* were able to inflict heavy losses to the enemy, with only one soldier killed in action and another wounded.⁴⁹⁰

In the aftermath of Caporetto, the Italian Army was still able to maintain the initiative in some areas of the front (Trentino), taking advantage of the specialized skills of its assault units. Third, on January 28 and 29, 1918, five assault battalions (I, II, IV, XVI, and XXVI) took part in the “Battle of the Three Mountains” (around the Asiago Plateau), together with three infantry brigades, one *Bersaglieri* regiment, and five *Alpini* battalions. This attack with limited objectives resulted in the recapture of three key terrain features, Rosso Hill, Echele Hill, and Valbella Mount, that had fallen in Austrian hands in December 1917. Furthermore, the Italian troops seized 2,500 prisoners, six artillery pieces, and 100 machine guns.⁴⁹¹ This engagement calls for some considerations. On the one hand, the Italian Army was able to take the initiative at the local level, integrating the capabilities of conventional and special units to carry out a difficult task. On the other hand, this episode highlighted a not yet effective interoperability between assault battalions and follow-on formations. Shortfalls in coordination among the supporting artillery, the *Arditi*, and the other formations precluded a further consolidation of gains with the capture of the Austrian positions in Melaghetto, on January 30, 1918.⁴⁹²

⁴⁹⁰ Morisi, *Hell in the Trenches*, 229-232.

⁴⁹¹ Di Martino and Cappellano, *The Italian Assault Units in the Great War (1915-1918)*, 1:119-120.

⁴⁹² Di Martino and Cappellano, *The Italian Assault Units in the Great War (1915-1918)*, 1:120. See also Pirocchi, *The Arditi*, 27-28; Rochat, *The Arditi of the Great War*, 93-94.

The description of the fourth phase of the *Arditi* historical development necessitates a bit of context. From February 1918, taking advantage of a lull in the hostilities along all the front, the Italian Army started a process of renovation under the lead of General Armando Diaz. The Italian military institution pointed at a “harmonic development” of its forces. First, it focused on upgrading training, equipment, force structure, and morale of the infantry branch. Second, it sought a better integration between artillery and infantry formations. Last, Diaz reaffirmed the centrality of the infantry division as the main element of maneuver.⁴⁹³

The rationalization that followed saw the activation of new field armies and the re-designation of others.⁴⁹⁴ The order of battle of the assault battalions changed as well. The overall principle adopted by the Italian military establishment was to “normalize” the assault outfits by reducing the capability gap between the conventional infantry formations and the assault ones. This process implied an attempt to develop the infantry battalions along the same standards used by the assault battalions in 1917. With these premises, the *Arditi* units became more and more akin to the modern special operation forces. Their mission was to attain specific effects on the battlefield, often conducting

⁴⁹³ Di Martino and Cappellano, *The Italian Assault Units in the Great War (1915-1918)*, 1:112, 115. See also Rochat, *The Arditi of the Great War*, 71-72.

⁴⁹⁴ The month of April saw the establishment of the Sixth and Seventh armies, and, in the month of May, the Second and Fifth armies were renamed as Eighth and Ninth. Di Martino and Cappellano, *The Italian Assault Units in the Great War (1915-1918)*, 1:112, 115.

critical tasks in the offensive and counter-offensive. In essence, they ceased to be the primary solution to the problem of the breakthrough in trench warfare.⁴⁹⁵

On the organizational side, this process triggered multiple transformations. First, it led to the activation of new assault battalions and to the redistribution of the ones already available, to provide every army corps with an assault outfit. Furthermore, two battalions were born abroad, respectively, the XVI Battalion assigned to the XVI Corps operating in Albania and the XXXV Battalion supporting the 35th Division in Macedonia. In addition, the II Battalion deployed to the Western Front with the II Corps in April, followed by the XXXII in September.⁴⁹⁶ Second, in March 1918, the Supreme Command established assault training and replacement battalions (*reparti d'assalto di marcia*), one for each army. Their role included the initial training of recruits, management of replacements, and of soldiers recovering from injuries. These outfits took the place of the instruction camps, lost after the Caporetto debacle.⁴⁹⁷ Third, in June 1918, the Supreme Command authorized the permanent activation of *Arditi* platoons in

⁴⁹⁵ Di Martino and Cappellano, *The Italian Assault Units in the Great War (1915-1918)*, 1:118.

⁴⁹⁶ The assault battalions assumed the same numeral designation of the parent corps. Di Martino and Cappellano, *The Italian Assault Units in the Great War (1915-1918)*, 1:112-115. See also Pirocchi, *The Arditi*, 9; Rochat, *The Arditi of the Great War*, 61-62, 64-65.

⁴⁹⁷ The assault training and replacement battalions assumed the numeral designation of the parent army. Di Martino and Cappellano, *The Italian Assault Units in the Great War (1915-1918)*, 1:112, 115. See also Rochat, *The Arditi of the Great War*, 65.

the infantry regiments and later also in the Marines Regiment and the *Alpini* battalions.⁴⁹⁸ Last, the Supreme Command decided to take the *Arditi* concept to a higher organizational level, activating an assault division on June 8, 1918, and an assault corps on June 10, 1918. The former incorporated nine assault battalions divided into three assault groups (regiment size), a mountain artillery group, a cavalry squadron, a *Bersaglieri* cyclist battalion, a pioneer battalion, supported by communications, transportation, and logistical assets.

The Assault Corps included the Assault Division “A” and a Czechoslovakian division. On June 27, the latter was replaced by a second assault division.⁴⁹⁹ This

⁴⁹⁸ Di Martino and Cappellano, *The Italian Assault Units in the Great War (1915-1918)*, 1:132-133.

⁴⁹⁹ The creation of the assault division required the allocation of nine assault battalions drafted from the ones supporting nine army corps. This entailed the activation of other nine assault battalions that were designating putting the numeral “L” before the numeral designator of the parent corps. The battalions moved to the assault division maintained the original designation (that equaled to the one of the previous parent corps). With the activation of the 2nd Assault Division, three more battalions were added to those already available for the 1st Assault Division, to reach a total of 12. These, in turn, were redistributed in the measure of two battalions per assault group, for a total of six groups split between the two divisions. The triangle structure of each assault group was restored through the integration of one *Bersaglieri* battalion for each group. The Supreme Command, in concert with Grazioli, chose these particular formations because they could provide the right amount of combat power and mobility to boost the maneuver capabilities of the assault groups downsized on two assault battalions. Upon the activation of the 2nd Division, six of the nine battalions established at the beginning of June, to replace the ones subtracted from the corps, were disbanded to reinforce the already existing assault outfits of the 1st Division, in light of the losses reported in the Battle of the Solstice. Moreover, they also served to constitute the two assault training and replacement battalions of the assault corps. Lastly, the establishment of the two assault divisions determined a step back in the initial intent of assigning one assault battalion for each corps, relegating the assault outfits back in the role of supplementary units at the army echelon. Di Martino and Cappellano, *The Italian Assault Units in the Great War (1915-1918)*, 1:124, 130-131, 155-159, 178-181.

endeavor stemmed from a proposal brought forth by General Grazioli in early 1918. He intended to establish a heavy assault instrument to use as a force multiplier in specific sectors of the front, to obtain favorable effects in offensive or counteroffensive operations. Almost certainly, this project took into account the example set by the German Army, with the creation of the *Angriffsdivisionen* (assault divisions), mentioned in the third chapter of the present study.⁵⁰⁰

The table below illustrates the order of battle of the Italian Army assault units at the beginning of August 1918.

⁵⁰⁰ Di Martino and Cappellano, *The Italian Assault Units in the Great War (1915-1918)*, 1:136-137. See also Rochat, *The Arditi of the Great War*, 98.

Table 6. Situation of the Assault Battalions in the Italian Army at the Beginning of August 1918

Parent Command	Assault Battalions
1st Assault Division	X, XX (1st Assault Group with I <i>Bersaglieri</i> Battalion), XXII, XIII (2nd Assault Group with VII <i>Bersaglieri</i> Battalion), VIII, XXII (3rd Assault Group with IX <i>Bersaglieri</i> Battalion)
2nd Assault Division	XIV, XXV (4th Assault Group with VIII <i>Bersaglieri</i> Battalion), I, V (5th Assault Group with XV <i>Bersaglieri</i> Battalion), VI, XXX (6th Assault Group with LV <i>Bersaglieri</i> Battalion)
First Army (Garda–Val d’Astico sector)	XXIX, XXXI, LV
Third Army (southern Piave sector)	XI, XXVI, XXVIII
Fourth Army (Brenta–Piave sector)	IX
Sixth Army (Val d’Astico–Brenta sector)	LII, LXX
Seventh Army (Stelvio-Garda sector)	III
Eighth Army (Pederobba-Palazzon sector)	XXVII, LXXII
Ninth Army (Army reserve)	XVIII, XXIII
II Corps (France)	II
35th Division (Macedonia)	XXXV
XVI Corps (Albania)	XVI

Source: Created by the author with data from Basilio Di Martino and Filippo Cappellano, *I Reparti d’Assalto Italiani nella Grande Guerra (1915-1918)* [*The Italian Assault Units in the Great War (1915-1918)*], vol. 1 (Rome, Italy: Stato Maggiore dell’Esercito in collaboration with Rodorigo Editore, 2016), 124-125, 131.

On the operational side, the fourth phase saw the assault units employed in multiple raids and attacks with limited objectives between February and June 1918, and

their contribution to the Battle of the Solstice from June 15 to 24, 1918. In the first period, all the operational activities suffered a tactical stasis. The Supreme Command took advantage of this situation waging a wide variety of “small war operations” aimed at gathering information, gaining the initiative on the Austrian Army, and testing the effectiveness of the reorganization measures put in place. General Diaz intended to employ primarily conventional units, leaving the possibility for the army commanders to use the *Arditi* in selected operations. With these premises, the activities of the assault battalions initially revolved around the mountainous areas of Val Lagarina (Trento), Vallarsa (Vicenza), the Asiago Plateau, and the Grappa Massif. In April 1918, the Supreme Command extended their employment to the entire front.⁵⁰¹

The vast majority of these operations yielded successful outcomes, although there were also some tragic defeats. In general, the Italian Army obtained brilliant victories when the *Arditi* were supported by highly-trained conventional formations and were allocated the right time to plan and prepare.⁵⁰² Two meaningful examples illustrate this point. The first is the conquest of the Austrian positions on the Corno di Vallarsa, carried out by the III (later V) Battalion between May 10 and 14, 1918. Following a short and intense artillery barrage, elements of the III Battalion and the Murge Brigade were able to break in the Austrian positions on the mountain gap under the top of Mount Corno (elevation 1,761 meters). However, the Austrian response was swift and violent and fixed

⁵⁰¹ Di Martino and Cappellano, *The Italian Assault Units in the Great War (1915-1918)*, 1:120-121.

⁵⁰² Di Martino and Cappellano, *The Italian Assault Units in the Great War (1915-1918)*, 1:120-123. See also Rochat, *The Arditi of the Great War*, 94.

the attackers in place. After a two-day stalemate, an *Arditi* team of five men climbed the steep face of the mountain from the opposite side of the main avenue of approach and successfully raided the positions on the top of it.⁵⁰³ In this way, the Italian forces were able to capture 100 prisoners and copious enemy material, including two cannons and four machine guns.⁵⁰⁴

The second example is the “White Battle,” the attack of the Austrian positions around Paradiso Pass and Cima Presena (in the vicinity of Tonale Pass), conducted by five *Alpini* battalions, eight regimental *Arditi* platoons and the XVII (later III) Battalion between May 25 and 26, 1918. The *Arditi* played a vital role in the capture of the Austrian strongpoint guarding Paradiso Pass and in the seizure of the Monticelli Peak (2,545 meters of elevation). The results of this operation included the control of a key terrain overlooking the Vermigliana Valley and the capture of 870 enemy soldiers, 10 artillery pieces, 14 trench mortars, and 25 machine guns at the cost of 228 Italians killed or wounded.⁵⁰⁵

Differently from the previous cases, on May 23, the XIX Battalion assaulted the entrenched positions of Zugna Torta (Mount Zugna, Trento), suffering a tragic and costly defeat. As maintained by the historian Paolo Pedri, the action failed because the *Arditi*

⁵⁰³ Di Martino and Cappellano, *The Italian Assault Units in the Great War (1915-1918)*, 1:123. See also Pirocchi, *The Arditi*, 29; Rochat, *The Arditi of the Great War*, 94; Farina, *The Italian Assault Troops*, 294-295.

⁵⁰⁴ Farina, *The Italian Assault Troops*, 295.

⁵⁰⁵ Morisi, *Hell in the Trenches*, 244-254. See also Di Martino and Cappellano, *The Italian Assault Units in the Great War (1915-1918)*, 1:124; Pirocchi, *The Arditi*, 29; Rochat, *The Arditi of the Great War*, 94.

were not allowed to plan and prepare properly for it. Instead, they had to follow a plan arbitrarily prepared by the Commander of the 27th Infantry Division, Lieutenant General Francesco Coco.⁵⁰⁶

Before closing the fourth phase of the *Arditi*'s history, it is appropriate to make a synthetic review of their employment during the Austrian offensive known as the "Battle of Solstice," carried out between June 15 and 24, along the eastern part of Italian Front in a coordinated fashion with the German *Kaiserschlacht* offensive of late spring 1918. All the Italian assault battalions in Italy took part in the fights except for the III Battalion, which was in the sector of the First Army unmolested by the offensive.⁵⁰⁷ Overall, the Italian assault units were similarly employed by conducting immediate counterstrokes and deliberate counter-attacks to stem the flow of the Austrian advance.⁵⁰⁸ In many cases, they were able to obtain brilliant results. An example is the IX Battalion, which, on June 15, was able to conquer Col Fenilon (Grappa Massif) and, on June 16, to seize the Col Moschin (Grappa Massif). The last action entailed a swift assault with a robust artillery preparation that allowed the seizure of the Austrian positions in only 10 minutes, resulting in the capture of 400 prisoners and copious enemy materials.⁵⁰⁹

⁵⁰⁶ The XIX Battalion was supported by the I Assault Training and Replacement Battalion for this operation. See Paolo Pedri, *Il XIX Reparto Alpini d'Assalto in Val Lagarina (1918)* [*The XIX Alpini Assault Battalion in Lagarina Valley (1918)*] (Rovereto (TN), Italy: New-Book Edizioni, 2019), 129-146.

⁵⁰⁷ Di Martino and Cappellano, *The Italian Assault Units in the Great War (1915-1918)*, 1:125.

⁵⁰⁸ Rochat, *The Arditi of the Great War*, 94.

⁵⁰⁹ Farina, *The Italian Assault Troops*, 310.

In other cases, the *Arditi* battalions were launched against the enemies too early and without adequate preparation, suffering heavy losses. The employment of the XXVII Battalion in the area of Montello is a meaningful example. In the afternoon of June 15, this battalion received the order to counter-attack an Austrian force composed of the *13th Sturmabteilung* and three *Jäger* battalions. Nonetheless, the XXVII offered stiff resistance and was able to seize and hold the assigned positions until June 19, when follow-on formations arrived to relieve it. The assault battalion suffered 58 killed in actions and 110 wounded in action but captured 130 prisoners (including the commander of the *132nd Honved Brigade*).⁵¹⁰

During the Battle of the Solstice, the newly-born 1st Assault Division experienced its baptism of fire in the Piave sector. More precisely, on June 16, the Third Army received the tactical control of the division to contain an Austrian penetration near Fossalta (64 kilometers north of Venice). Deployed to this location on June 17, the new outfit received the task of neutralizing the enemy bridgehead and conducting a strong counter-attack in depth. However, the Third Army chose to unleash the assault division prematurely, against an enemy that had not yet culminated. Although the division, supported by the conventional units handling that sector, was successfully able to stem the tide of the Austrian attack between June 17 and 19, it did not yield the expected results. In addition, there were some difficulties in the coordination of the battalions of the assault division. Activated just nine days before, the unit did not have enough time to

⁵¹⁰ Farina, *The Italian Assault Troops*, 313.

conduct the appropriate training to blend its components, nor to do rehearsals before the action proper.⁵¹¹

After the Battle of the Solstice, the Italian forces shifted back to the conduct of raids and attacks with limited objectives along the entire front. This was the fifth phase of the *Arditi*'s history and lasted until the beginning of the final Italian offensive at the end of October 1918. The Italian Supreme Command intended to maintain the pressure on the enemy forces, to prevent the deployment of Austrian formations on the Western Front. The Italian operational plan envisaged the execution of aggressive patrolling of no man's land and small platoon-level raids by the conventional line units, with the commitment of the assault battalions for difficult and rewarding operations. By and large, the *Arditi* units maintained a high level of performance, even if, on more than one occasion, their wrong and hurried employment led to tragic failures.⁵¹²

The attack of one assault company of the XXIX Battalion (supported by elements of the *Exilles Alpini* Battalion) against the Austrian strongpoint of Dosso Alto di Zures (Trento) on August 3, 1918, clearly illustrates the high technical level reached by the Italian assault outfits at this stage of the war. The Dosso Alto was critical for controlling

⁵¹¹ Di Martino and Cappellano, *The Italian Assault Units in the Great War (1915-1918)*, 1:129-130. See also Pirocchi, *The Arditi*, 34-35; Rochat, *The Arditi of the Great War*, 98-99; Farina, *The Italian Assault Troops*, 314-318. During the Battle of the Solstice, the 1st Assault Division suffered 143 killed in action, 649 wounded in action and 350 missing in action on an overall strength of about 6,000, among officers, NCOs and enlisted. On June 20, the division withdrew to reconstitute its combat power considering the significant losses reported. See Rochat, *The Arditi of the Great War*, 99.

⁵¹² Di Martino and Cappellano, *The Italian Assault Units in the Great War (1915-1918)*, 1:136-137. See also Pirocchi, *The Arditi*, 38; Rochat, *The Arditi of the Great War*, 103.

the Lagarina Valley. After seizing it in June, the Austrian had built a strong defensive system consisting of concrete fortifications connected by a complex underground tunnel system. After thorough target surveillance, the *Arditi* opted for a daylight attack, when the enemy was usually more relaxed. On the contrary, during the night, the presence of multiple enemy roving patrols would have compromised any chance to maintain the surprise. Approaching the objective during the night between August 2 and 3 without the customary support of an artillery preparation barrage, the “Green Flames” lay hidden at the last covered and concealed positions until the beginning of the attack. Covered by a short and intense pinpoint barrage, they were able to neutralize the enemy sentinels and to block the remaining part of the garrison inside the tunnels. At that point, the *Arditi* forced the snared enemy troops into submission through a masterful combination of grenades and flamethrowers. At the end of the day, 163 prisoners had fallen in Italian hands, at the price of 10 killed in action, and 37 wounded in action.⁵¹³

On the other side, the failure of the XII and XIII battalions in the attacks against the Austrian positions of Col del Rosso and Mount Valbella (executed in support of the Sixth Army between August 7 and 9) offers a meaningful example of a tragic defeat caused by the wrong employment of this special assets. Insufficient planning and preparation, together with major shortfalls in the knowledge of the specific terrain, prevented the considered battalions from consolidating after the initial break-in, resulting in a subsequent withdrawal with numerous casualties.⁵¹⁴ Overall, during the fifth phase,

⁵¹³ Morisi, *Hell in the Trenches*, 277-279.

⁵¹⁴ The XII and XIII battalions were not “Green Flames” and had not served recently in the sector of Asiago. Di Martino and Cappellano, *The Italian Assault Units in*

the Italian Army was able to maintain the initiative before the final offensive and to bind the Austrian war efforts to the Italian Front effectively. The number of Austrian prisoners captured in this phase (4,124), compared with the number of Italian prisoners fallen into enemy hands (331), is a valid confirmation of the positive outcomes of the small unit actions waged in the period July–October 1918.⁵¹⁵

The sixth and last phase of the history of the *Arditi* sees their commitment in the Battle of Vittorio Veneto, some additional stints in Albania and Libya after the end of the Great War, and their final disbandment. The Italian Offensive planned for the end of October, aimed at inflicting a *coup de grâce* to the Austro-Hungarian forces. The purpose of this operation was to deliver a crippling blow to the enemy before the Austrian Emperor could effectively obtain separate peace talks with US President, Woodrow Wilson. This would have prevented the Italian Government from imposing advantageous terms in the negotiations at the end of the war.⁵¹⁶

The initial plan drafted by General Diaz envisaged the decisive operation as the penetration of the northern sector of the Piave River near the Montello. The Eighth Army, commanded by General Enrico Caviglia, received this task, covered on the flanks by the Anglo-Italian Tenth Army (right flank) and the French-Italian Twelfth Army (left flank). On the rest of the front, the other armies had to fix the Austrians in place, standing ready

the Great War (1915-1918), 1:137. See also Rochat, *The Arditi of the Great War*, 103; Farina, *The Italian Assault Troops*, 327.

⁵¹⁵ Di Martino and Cappellano, *The Italian Assault Units in the Great War (1915-1918)*, 1:138-139.

⁵¹⁶ Thompson, *The White War*, chap. 26.

to push through as soon as the Eighth Army seized Vittorio Veneto. Twelve days prior to the beginning of the operation (October 24, 1918), the strong political pressure to attack before the end of October and the unsuitable conditions of the Piave River forced General Diaz to reconsider. Thus, he assigned to the Fourth Army (Mount Grappa sector) the task of penetrating the Austrian lines in the Mount Grappa area to carry on an envelopment west, towards the Asiago Plateau.⁵¹⁷

The overall scheme of maneuver influenced the employment of the Italian assault units. On the one hand, the Assault Corps was integrated into the Eighth Army to spearhead the penetration (one division north and the other south of the Montello). On the other hand, the independent assault battalions were redistributed according to the allocation priorities of the plan, mainly to enable the Fourth Army's maneuver.⁵¹⁸

With these premises, on October 24, the Fourth Army started the attack, with its assault battalions (IX, XVIII, XXIII, and LV) at the head of infantry columns tasked with breaking in the Austrian lines at specific points of the front. The results were disastrous because the Austrian forces were heavily entrenched and supported by strong artillery elements. Furthermore, the last-minute changes to the plan prevented the Fourth Army units and the assault units to properly prepare the attacks, that, most of the time, lacked the required surprise factor.⁵¹⁹

⁵¹⁷ Thompson, *The White War*, chap 26.

⁵¹⁸ Di Martino and Cappellano, *The Italian Assault Units in the Great War (1915-1918)*, 1:139-140.

⁵¹⁹ *Ibid.*, 1:140-145.

As an example, on October 25, the IX Battalion attacked Mount Asolone and Col della Beretta, seizing it along with 600 prisoners. Nonetheless, a strong Austrian counterstroke forced the IX Battalion to withdraw, losing half of his strength in the process. This happened because the follow-on forces had not been able to reinforce the seized positions in time. The IX attacked the same positions for a second time on October 29 without achieving significant results. In these two offensive operations, the battalion lost 28 Officers and 410 *Arditi*, remaining only with three officers and 100 troopers.⁵²⁰

In the Piave sector, unfavorable weather conditions, together with a flood of the Piave River, disrupted the offensive operations until October 29. For the sake of synthesis, the short review provided in the following paragraph will consider the actions of the two assault divisions with the Eighth Army and of the XI Battalion leading the Tenth Army (south of the Eighth Army's positions along the Piave River). First, in the night between October 26 and 27, the 1st Assault Division led the XXII Corps in the crossing of the river into the Sernaglia Plain (north of the Montello). Exploiting the initial shock effects, they were able to push through until the Austrian forces arrested them on the hill overlooking said plain. Lacking the concurrent support of the 2nd Assault Division to the south, those forces fell back on the bridgehead (east of Vidor) and defended it until October 28.⁵²¹ Second, to the south of the Montello, on the night between October 26 and 27, the XI Assault Battalion led elements of the XI Corps (Tenth Army) across the river and established a bridgehead near the Grave di Papadopoli.

⁵²⁰ Rochat, *The Arditi of the Great War*, 104.

⁵²¹ Di Martino and Cappellano, *The Italian Assault Units in the Great War (1915-1918)*, 1:146. See also Rochat, *The Arditi of the Great War*, 108.

Unable to push further, due to the river conditions and stiff Austrian resistance, the battalion defended said bridgehead for four days (until October 31).⁵²² Last, the 2nd Assault Division, ready to cross the river in the early hours of October 27 near Nervesa della Battaglia (between the positions of the 1st Assault Division to the north and the bridgehead of the XI Battalion, to the south), was stalled by the conditions of the river. The assault division was finally able to push through on October 29, moving towards the village of Susegana and Conegliano. In turn, this created favorable conditions for the 1st Assault Division to shift again on the offensive and penetrate the Austrian defenses at the eastern edge of the Sernaglia Plain.⁵²³

On October 29, 1918, the Austrian defenses on the Piave sector began to disintegrate. By October 31, Italian forces spearheaded by the *Arditi* battalions started to puncture the Austrian lines from Trento to the lower Piave. The rupture of the front quickly transitioned into a pursuit. The key terrain of Vittorio Veneto fell in Italian hands on October 31, a few days before the end of the hostilities, proclaimed by the armistice signed on November 4, 1918.⁵²⁴

The analysis of the performance of the Italian assault units in the last phase of their history reveals interesting points to reflect on. First, the assault battalions seemed to

⁵²² Di Martino and Cappellano, *The Italian Assault Units in the Great War (1915-1918)*, 1:145. See also Rochat, *The Arditi of the Great War*, 104.

⁵²³ Di Martino and Cappellano, *The Italian Assault Units in the Great War (1915-1918)*, 1:146. See also Rochat, *The Arditi of the Great War*, 108.

⁵²⁴ Di Martino and Cappellano, *The Italian Assault Units in the Great War (1915-1918)*, 1:146. See also Rochat, *The Arditi of the Great War*, 108; Thompson, *The White War*, chap. 26.

be “an effective instrument of war,” if employed correctly. Especially on the Grappa Massif, the lack of preparation and surprise did not allow the *Arditi* to go further than the initial break-in and seizure of the first objectives, with a subsequent repulse due to Austrian counterstrokes. Furthermore, the chronic issues in the coordination with conventional follow-on formations, critical to consolidate gains considering the light asset of the *Arditi*, contributed further to this point.⁵²⁵

Second, with precise reference to the performance on the 1st Assault Division in the Sernaglia Plain, the attempt to extend the *Arditi* battalion’s concept and tactics at the divisional level probably had not yet reached a mature stage. As posited by Rochat, the lack of success against the eastern defenses of the Sernaglia Plain on October 27 could have been caused, at least in part, by the lack of coordination among the 1st Division’s components battalions in obtaining decisive results at precise breaching points.⁵²⁶ Last, when the Austrian defenses disintegrated, the *Arditi*’s offensive orientation, agility, and mobility on the battlefield paid high dividends. The assault formations could provide an essential contribution to the subsequent pursuit and consolidation of gains along the entire front, employed alone or integrated with cavalry and cyclist formations.⁵²⁷

The end of the Great War marked the beginning of a progressive disbandment of the *Arditi* units that finished in the first months of 1921. Without the immediate and

⁵²⁵ Di Martino and Cappellano, *The Italian Assault Units in the Great War (1915-1918)*, 1:146-147. See also Rochat, *The Arditi of the Great War*, 105.

⁵²⁶ Rochat, *The Arditi of the Great War*, 109.

⁵²⁷ Di Martino and Cappellano, *The Italian Assault Units in the Great War (1915-1918)*, 1:147.

compelling threat represented by the Austro-Hungarian forces, the aversion towards the Italian assault troops, matured inside the Supreme Command by certain superior officers, certainly played a critical role. More precisely, this attitude favored the disposal of an instrument that, albeit useful in war, proved problematic in peace.⁵²⁸ Even worst, General Grazioli, who had been akin to a founding father for the *Arditi*, propended towards this termination. On November 18, 1918, the general officer wrote a memorandum analyzing the possible outcomes of the *Arditi* project in the aftermath of the conflict. In his view, the Italian Army should have rapidly dismantled the assault units or, in alternative, should have downsized and deployed them to the colonies. He even discarded the idea of maintaining an assault battalion for each territorial army command. Grazioli identified the innovative characteristics of the *Arditi* in their training and tactics, that were, in his view, easily exportable to conventional infantry units.⁵²⁹

Grazioli's observations easily swayed his direct superior, General Caviglia (the Eighth Army Commander), who, in turn, conveyed these ideas to the top echelons of the Army. The final decision of the Supreme Command envisaged a progressive disbandment of the assault units, with the deployment of the 1st Assault Division to Libya to support

⁵²⁸ The *Arditi*'s atypical concept of discipline, source of abundant rumors and false myths, and the adhesion of some of his soldiers to the Fascist movement, favored a negative perception of the assault units inside the Italian military institution. In the post-war process of demobilization, these considerations tipped the scale of the organizational debate inside the Italian Army Staff towards the decision to disband the *Arditi* formations. Pirocchi, *The Arditi*, 122. See also Rochat, *The Arditi of the Great War*, 126-127.

⁵²⁹ Di Martino and Cappellano, *The Italian Assault Units in the Great War (1915-1918)*, 1:257-258. See also Pirocchi, *The Arditi*, 122-123; Rochat, *The Arditi of the Great War*, 125-126.

the Italian Government's consolidation plans for that colony. First, on November 28, 1918, the Assault Corps was demobilized. Second, between January and February 1919, all the independent assault units and the 2nd Assault Division were decommissioned.⁵³⁰ Third, the 1st Assault Division received orders to deploy to Libya in March 1919. Once arrived, the division assumed the role of strategic reserve of the Tripolitania region, without seeing significant action.⁵³¹ Between June and July 1919, the assault division redeployed back to Italy, establishing provisional quarters initially in the area between Cremona and Reggio Emilia with the task of enforcing public control.⁵³²

This decision was in line with an initiative of General Caviglia, in the role of Minister of War since April 1918. More specifically, he mandated the creation of a territorial inspectorate of the assault troops and the reactivation of a certain number of assault battalions under the territorial corps. The official reason for this choice was an attempt to better control the large number of *Arditi* soldiers who, discharged from the Army, were feeding the ranks of the right-wing activist groups of futurist affiliation.⁵³³

⁵³⁰ Di Martino and Cappellano, *The Italian Assault Units in the Great War (1915-1918)*, 1:260-261. See also Pirocchi, *The Arditi*, 123-124; Rochat, *The Arditi of the Great War*, 126-127.

⁵³¹ Di Martino and Cappellano, *The Italian Assault Units in the Great War (1915-1918)*, 1:240-246. See also Rochat, *The Arditi of the Great War*, 126.

⁵³² The area of Cremona and Reggio Emilia was at risk for the presence of a large concentration of socialist activists capable of undermining public order. Di Martino and Cappellano, *The Italian Assault Units in the Great War (1915-1918)*, 1:262-263; Rochat, *The Arditi of the Great War*, 128.

⁵³³ Di Martino and Cappellano, *The Italian Assault Units in the Great War (1915-1918)*, 1:261-262. See also Pirocchi, *The Arditi*, 124; Rochat, *The Arditi of the Great War*, 127-128.

Most likely, as suggested by Rochat, General Caviglia wanted to create options to contain and suppress the socialist political groups that in this period were strongly manifesting against the Italian Government. This endeavor failed when General Alberico Albricci replaced General Caviglia as Minister of War, after a political crisis that also caused the change of the Italian Prime Minister.⁵³⁴

At the end of July 1919, the 1st Assault Division, the last *Arditi* unit still in activity, was moved to the eastern borders to enforce the terms of the armistice. In September, the assault units' credibility took another blow. Two full battalions of the division mutinied, taking part in the occupation of Fiume (a city in the contemporary Republic of Croatia) instigated by Gabriele D'Annunzio.⁵³⁵

On January 10, 1920, the 1st Assault Division was finally decommissioned, leaving in its place the 1st Assault Group, composed of three assault battalions (X, XX, and XXII), one Assault *Bersaglieri* Regiment, one *Bersaglieri* battalion (cyclists) and one armored car squadron. This new unit was quartered in the region of Friuli Venezia Giulia (rotated through different barracks) and later assumed the denomination of 1st Assault

⁵³⁴ Rochat, *The Arditi of the Great War*, 127-128.

⁵³⁵ The occupation of Fiume was a political demonstration organized by the futurist poet Gabriele D'Annunzio (who also served as an officer in the *Arditi* during the war) against the denied annexation of Fiume to Italy, as sanctioned by the terms of the Versailles Treaty. The futurist activists, inspired by irredentist ideas, saw Fiume as an Italian city in virtue of its historical affiliation with the Republic of Venice and the large share of Italians inhabitants. Di Martino and Cappellano, *The Italian Assault Units in the Great War (1915-1918)*, 1:262-263. See also Pirocchi, *The Arditi*, 125; Rochat, *The Arditi of the Great War*, 128-130.

Brigade.⁵³⁶ Deployed to Albania between June and August 1920, the brigade took part in the defense of Valona against the attack of numerically superior Albanian insurgent forces at the end of July. In these circumstances, the *Arditi* showed once again remarkable fighting skills and unshakable determination.⁵³⁷

On November 17, 1920, the 1st Assault Brigade (quartered in Friuli after the redeployment from Albania) underwent a reduction of its *Arditi* battalions from three to only one (XX). At the end of February 1921, the Supreme Command disbanded the 1st Assault Brigade and its component units, including the XX Battalion, leaving only the 29th Assault Company, based in Palmanova del Friuli.⁵³⁸ As posited by the historians Di Martino and Cappellano, the considerations behind the political decision to get rid of the assault battalions were easily understandable. However, the way the Supreme Command managed this process was not as justifiable. The Army did not make appropriate efforts to retain the *Arditi*'s innovative breakthroughs introduced in the organizational, training, and doctrinal domains, as their units progressively disappeared. The outcomes of this demobilization canceled in one shot the “synthesis of the historical evolution” performed by the Italian infantry during the Great War, taking back the doctrinal and organizational situation of the branch at pre-war levels.⁵³⁹

⁵³⁶ Di Martino and Cappellano, *The Italian Assault Units in the Great War (1915-1918)*, 1:266.

⁵³⁷ *Ibid.*, 1:234-240.

⁵³⁸ *Ibid.*, 1:266-267.

⁵³⁹ *Ibid.*, 1:258.

Organization of the *Arditi*

The analysis provided in this section of the current chapter will focus on three main stages of the organizational evolution of the *Arditi* units: the original model of assault battalion conceived by Lieutenant Colonel Bassi, the variant of the battalion deriving from the reorganization of spring 1918 and the Army Assault Corps. This choice is in line with the assault battalions' evolutionary pattern, after their first official inception in June 1917. As already offered, the Supreme Command's directive *Assault Battalions* of June 1917 did not list any specific indications regarding the force structure of the new units.⁵⁴⁰ More precise and complete directions on the matter arrived only with the circular no. 117050, *Equipment, armament and organizational structure of the assault battalions*, dated September 21, 1917. The intent of the Supreme Command in leaving this initial void was to stir the presentation of proposals and observations by the subordinate levels to integrate the results of the Second Army's experimentations.⁵⁴¹

Lacking detailed and binding orders, most of the armies followed the example of the Second Army and adopted its model during 1917.⁵⁴² The reason for that is threefold. First, the Second Army, by virtue of the work conducted by Grazioli and Bassi, was, without a doubt, the quickest to field effective solutions at the organizational level for the

⁵⁴⁰ Di Martino and Cappellano, *The Italian Assault Units in the Great War (1915-1918)*, 1:65.

⁵⁴¹ *Ibid.*, 1:65-66.

⁵⁴² *Ibid.*, 1:87.

new outfits.⁵⁴³ Second, the Second Army was also the first to test the soundness of its concepts during the Eleventh Battle of the Isonzo, with encouraging results.⁵⁴⁴ Third, during August 1917, the Second Army *Arditi* school organized a two-week course to train the superior officers designated as responsible for the development of the assault formations in the other armies.⁵⁴⁵

The considerations above convey why the original concept developed by Bassi is the necessary starting point to understand the *Arditi* organizational model. The force structure adopted during the reorganization of 1918, instead, reflected more the precepts of the Supreme Command's circular of September 1917, as a part of those "normalization" efforts aiming at a proper integration of the *Arditi* formations in the Army structure.⁵⁴⁶ Thus, the illustration of this framework must be the second step to understand the *Arditi* organizational evolution. Finally, the idea of assault corps and assault division represented the final chapter of the Italian assault units' development. Hence it will be the third point of the offered review.

The criteria adopted by Lieutenant Colonel Bassi to design the original model of assault battalion were informed by the tactical employment of this outfit, both at the

⁵⁴³ Di Martino and Cappellano, *The Italian Assault Units in the Great War (1915-1918)*, 1:71-73. See also Pirocchi, *The Arditi*, 21-22; Rochat, *The Arditi of the Great War*, 35.

⁵⁴⁴ Di Martino and Cappellano, *The Italian Assault Units in the Great War (1915-1918)*, 1:81-82.

⁵⁴⁵ Farina, *The Italian Assault Troops*, 74.

⁵⁴⁶ Di Martino and Cappellano, *The Italian Assault Units in the Great War (1915-1918)*, 1:102, 109, 118-119. See also Pirocchi, *The Arditi*, 117; Rochat, *The Arditi of the Great War*, 61-63.

battalion and at the company level. More precisely, the new unit needed a structure that granted both organic firepower and the ability to penetrate and disrupt the enemy's defensive system in depth. The assault company was the focal point around which the entire concept revolved. It required the right number and type of automatic weapons to operate independently, except for the artillery support. One level down, the attack platoon needed to maintain the capability to manage autonomously small raids or other types of minor offensive actions. One level up, the assault battalion could leverage more combat power by aggregating multiple companies and granting a minimal level of direct artillery support. This framework allowed the execution of offensive operations at various levels through the synergic actions of independent components able to maneuver through their organic automatic weapon teams.⁵⁴⁷

The assault battalion was composed of three assault companies (also called “musketeer companies”), one replacement company, one flamethrower section, one mountain artillery section loaded on pack animals, and four trucks. Its total strength counted 19 officers, 21 NCOs, 676 enlisted, and 37 artillery specialists. Furthermore, its distribution tables included 24 submachine guns, eight heavy machine guns, two 65-millimeter mountain cannons, and 15 portable flamethrowers. In this way, the battalion could operate with two companies abreast and one in reserve or with three companies abreast, depending on the width and the depth of the sector to attack.⁵⁴⁸

⁵⁴⁷ Farina, *The Italian Assault Troops*, 91-92.

⁵⁴⁸ *Ibid.*, 92-94, 115.

The artillery section was administratively part of the 3rd Assault Company. However, the battalion commander, for battalion-level operations, or the company commander, for company-level operations, directly controlled it.⁵⁴⁹ The flamethrower section counted one officer, two NCOs, and 26 *Arditi* and was part of the 4th Assault Company (Replacement Company). This could generate up to six flamethrower groups, capable of supporting multiple *Arditi* formations.⁵⁵⁰

The 4th Assault Company, also known as Replacement Company, had the same structure of the other assault companies (explained later), except for the additional flamethrower section. Its function was to provide organic (squad or platoon size) replacements to the other companies of the battalion if their numbers were affected by losses in combat. During 1917, the *Arditi* used this method to reconstitute combat power, because they did not have permanent replacement battalions to fulfill this role, as the conventional units had. A “reservoir” of recruits and soldiers returning to duty after a convalescence period was always necessary, to maintain an acceptable level of effectiveness and efficiency in the battalion. Moreover, the replacements were exposed in

⁵⁴⁹ Farina, *The Italian Assault Troops*, 93.

⁵⁵⁰ After the first operational test of the flamethrower section during the battle of Mount San Gabriele (September 4, 1917), Bassi decided to concentrate all the flamethrowers groups under the 4th Company. Moreover, he recommended that the other Second Army assault battalions that at the time were ongoing activation, did not receive this type of weapon. The system proved to be very useful to flush out the last defenders from the underground tunnels in the last phase of the operation. However, its weight and cumbersomeness significantly hampered the flamethrower crews in keeping up with the other tactical elements during this action. For this reason, the *Arditi* of the I Battalion relegated this weapon to the role of reserve system and assigned the flamethrower section to the replacement company. Ultimately, according to Farina, the Supreme Command followed Bassi’s suggestions and did not field this kind of weapon to the other battalions. Farina, *The Italian Assault Troops*, 93-94, 97.

advance to the unit's training exercises and daily routine regimen, so that they were immediately combat-ready when injected in a company. The *Arditi* replacement system, when possible, swapped entire squads or platoons between an attrited operational company and the replacement company, to safeguard the existing synergy between the members of the considered unit.⁵⁵¹

An assault company, or musketeer company, included four attack platoons and one specialist platoon. Its overall strength was five officers, six NCOs, and 215 *Arditi*. The company usually adopted a formation on three subsequent echelons: two platoons abreast in the first echelon, also called fire echelon, one platoon in the second echelon to the right, and the other in third echelon to the left (or vice-versa). This formation allowed a swift reaction in any direction during the approach to an assigned target.⁵⁵²

The specialist platoon incorporated one heavy machine squad on two weapons, one sapper squad and one signal squad. The first, at the company commander's orders, had the task to accompany the advance of the attack platoons, integrating its fire with the submachine guns organic to the platoon. This section occupied positions in the rear of the company formation, providing suppressing fire as needed against pre-planned key enemy positions or threats that revealed themselves. Once an objective was taken, it rejoined the forward elements of the company and assured interdiction fire against enemy counterstrokes.⁵⁵³ Second, the sapper squad was built around six two-man elements,

⁵⁵¹ Farina, *The Italian Assault Troops*, 92-93.

⁵⁵² *Ibid.*, 114.

⁵⁵³ *Ibid.*, 109-112.

disposing of a wide variety of mechanical and explosive breaching tools to enable the company to break through enemy obstacles and defenses. During an operation, usually half of the squad operated with the leading elements, whereas the other half advanced behind the fire echelon to enlarge the gaps already created in the enemy wires.⁵⁵⁴

Last, the signal squad comprised one seven-man field telephone element, with the materials and preparation to set a four-kilometer line, and a four-man pyrotechnics element, that split between the leading elements and the company commander. These teams enabled fire coordination between the forward platoon and the company HQ (related to the heavy machine gun team) and between the company and the battalion HQ (related to the organic mountain artillery section and the available external fire support).⁵⁵⁵

An attack platoon incorporated one assault squad, two attack squads, and one submachine gun squad (also known as third attack squad). It had a total strength of one officer, one NCO, and 42 *Arditi*. The standard platoon formation during an assault envisaged the two attack squads and the assault squad deployed abreast in three parallel columns (with the assault squad in the center) and the submachine squad in the rear, in a central position.⁵⁵⁶

As suggested by their denomination, the squads in every attack platoon had a distinct specialization that also determined a different size and equipment. First, the

⁵⁵⁴ Farina, *The Italian Assault Troops*, 112.

⁵⁵⁵ *Ibid.*, 112-113.

⁵⁵⁶ *Ibid.*, 109.

assault squad totaled 12 *Arditi* (six “buddy teams”), each armed only with a dagger and 12 grenades. Its main task was to swiftly spearhead the attack of the platoon and overwhelm the enemy defenses, setting the conditions for the following elements to clear the positions and maneuver. In turn, the following elements enabled with their fire the envelopment maneuver of the assault squad. Second, the attack squad included 10 *Arditi* (five “buddy teams”), armed with carbine (musket), dagger, and grenades. Its role was to systematically disrupt with fire and maneuver the adversarial defensive system, integrating their actions with the assault squad’s ones.

Last, the submachine gun squad consisted of 12 *Arditi* (six “buddy teams”), operating two weapons. For every submachine gun, one “buddy team” managed the weapon, and the other two carried ammunition and provided close protection. The squad could work together or in two split teams and provided accompanying fire in the assault as directed by the platoon leader.⁵⁵⁷ The specific tactics associated with this peculiar organizational framework will be reviewed later in the chapter.

The smallest tactical element in the *Arditi* formations was the “buddy team.” This was one of the most innovative ideas in Bassi’s concept. Drawing from his personal experience and studies in military psychology, this officer adopted this expedient to boost the confidence and the initiative of the individual soldier on the battlefield. The reason for this choice was twofold. First, it eliminated the tendency of the soldiers to assemble in the critical moments of the action, awaiting the orders of their superiors. The “buddy team,” or “tactical pair” in Bassi’s words, was *de facto* the essential form of team that

⁵⁵⁷ Farina, *The Italian Assault Troops*, 104-107.

could operate independently in the framework of the overall platoon scheme of maneuver.

Second, this system forced every soldier to become responsible for his “buddy” in every situation, so developing his sense of responsibility and initiative. Building upon psychological mechanisms such as suggestion and emulation, the mutual collaboration and support stemming from this practice was, indeed, a force multiplier in combat. Interestingly, every *Ardito* was free to choose his counterpart and was always held accountable for his buddy’s actions. Furthermore, in battle, every soldier was responsible for the first aid and the transportation of his associate to the nearest medical station. This allowed Bassi to suppress the figure of the stretcher-bearer in the unit organization.⁵⁵⁸

The previous paragraphs illustrate the originality of Bassi’s first model. Moreover, the first test in combat confirmed its real effectiveness. However, the pronounced level of specialization associated with this method made it barely acceptable by the “Big Army.” Hence, it is not surprising that, during the general reorganization of the assault units in the aftermath of Caporetto, the Supreme Command enforced a less innovative and divergent model, more akin to the structure of a conventional infantry battalion, with the sole exception of a higher assignment of support weapons.⁵⁵⁹

The very first reorganization efforts conducted between December 1917 and January 1918 aligned the force structure of all the assault battalions to the tables of

⁵⁵⁸ Farina, *The Italian Assault Troops*, 101-104.

⁵⁵⁹ Farina, *The Italian Assault Troops*, 276. See also Di Martino and Cappellano, *The Italian Assault Units in the Great War (1915-1918)*, 1:119; Pirocchi, *The Arditi*, 119; Rochat, *The Arditi of the Great War*, 62-63.

organization and equipment previously approved by the Supreme Command with the circular *Equipment, armament and organizational structure of the assault battalions*, dated September 21, 1917. More precisely, every battalion shifted to three assault companies and one 58-millimeter mortar section (six weapons). Furthermore, every assault company maintained four attack platoons (without automatic weapons), one heavy machine gun section (two weapons), two submachine gun sections (four weapons), and one flamethrower section (four weapons).⁵⁶⁰

In essence, the assault battalion dropped the replacement company, traded the organic artillery section with one mortar section, and split the flamethrowers among its subordinate companies. In turn, these lost the specialist platoon and the special characterization of its component squads (assault, attack, and submachine gun). Furthermore, the official tables did not explicitly envisage the “buddy team.”⁵⁶¹ The Supreme Command did not re-establish the various *Arditi* schools at the army echelon, most of which had disappeared during the Caporetto debacle.⁵⁶² Later, in March 1918, the assault training and replacement battalions would have filled this gap,⁵⁶³ without the authorization to further experiment on new TTPs and materials.⁵⁶⁴

⁵⁶⁰ Di Martino and Cappellano, *The Italian Assault Units in the Great War (1915-1918)*, 1:87, 102, 109, 403, 413.

⁵⁶¹ Farina, *The Italian Assault Troops*, 276. See also Pirocchi, *The Arditi*, 117.

⁵⁶² Rochat, *The Arditi of the Great War*, 62.

⁵⁶³ Di Martino and Cappellano, *The Italian Assault Units in the Great War (1915-1918)*, 1:87, 102, 109, 403, 413.

⁵⁶⁴ Rochat, *The Arditi of the Great War*, 63.

From the end of July 1918, the assault battalions underwent a further organizational transformation. This entailed the incorporation of the heavy machine gun sections, previously part of the assault companies, in one separate machine gun company, that became the 4th company of each battalion. Similarly, all the flamethrower elements moved under the battalion in a larger section of 18 weapons.⁵⁶⁵

The activation of the Army Assault Corps represented a further step in the evolution of the assault units and their assimilation into the Army framework. On the one hand, following the persistent proposals of General Grazioli,⁵⁶⁶ the Supreme Command finally accepted to bring the assault battalion concept to the next level. Grazioli intended to harness the combat power of multiple *Arditi* battalions in a unit at echelon above brigade, capable of penetrating wider sections of the front line and autonomously perform exploitation in depth. Besides, such a formation could also provide an effective and powerful instrument to conduct decisive counter-attacks in the defense.⁵⁶⁷

On the other hand, the aggregation of part of the existing assault battalions under a division-level command highlights the Supreme Command's intent to promote an

⁵⁶⁵ Di Martino and Cappellano, *The Italian Assault Units in the Great War (1915-1918)*, 1:131-132, 404, 418. See also Pirocchi, *The Arditi*, 117.

⁵⁶⁶ Di Martino and Cappellano, *The Italian Assault Units in the Great War (1915-1918)*, 1:151-155.

⁵⁶⁷ Di Martino and Cappellano, *The Italian Assault Units in the Great War (1915-1918)*, 1:155. The Italian Army started to adopt a zonal defensive method similar to the concept of elastic defense in depth in 1918. The Battle of the Solstice, in mid-June, represents an example of the good level of assimilation of these procedures in the Italian doctrine. In this respect, the role of units conducting local counter-attacks to stem the tide of the enemy offensive and lead to its culmination was of the essence. See Morisi, *Hell in the Trenches*, 192-194. See also Thompson, *The White War*, chap. 26.

exchange process between the *Arditi* and the conventional infantry formations.⁵⁶⁸ In this respect, the doctrinal documents regulating the employment of the assault divisions envisaged the integration of the subordinate assault battalions with artillery, cavalry, and *Bersaglieri* formations organic to the same command.⁵⁶⁹ This trend is further underscored by the Supreme Command's decision to shape the training and assault battalion of the 1st Assault Division as an experimental unit called "T" (new type) battalion. Composed of four companies of four platoons each, it had the role to test prototype weapons for the infantry branch.⁵⁷⁰

The organizational criteria set by General Grazioli in devising the Assault Corps and the two Assault Divisions called for the necessity to maintain a streamlined configuration of organic combat support and combat service support elements. This initiative sought to avoid an excessive burdening of the new formations that had to retain an adequate level of mobility and agility to carry out their offensive tasks. Their concept of employment implied the conduct of operations in sectors of the front already controlled by other Army corps that could provide further fire and logistical support if

⁵⁶⁸ Pirocchi, *The Arditi*, 119-120. In this regard, it is appropriate to remember that the modernization concept promoted by General Diaz considered the division as a pivotal tactical element. Furthermore, the battalions of the conventional infantry divisions were reinforced and reorganized to function as essential sub-components of those commands. See Rochat, *The Arditi of the Great War*, 61, 72.

⁵⁶⁹ Di Martino and Cappellano, *The Italian Assault Units in the Great War (1915-1918)*, 1:188-189.

⁵⁷⁰ Pirocchi, *The Arditi*, 119-120.

needed.⁵⁷¹ The table reported below illustrates the composition of the Army Assault Corps at the end of June 1918.

Table 7. Order of Battle of the Army Assault Corps at the End of June 1918

<p><u>Assault Corps. Commander: Lieutenant General Francesco Saverio Grazioli</u> <u>Corps organic units</u> General Staff and Logistics Office Chemical Section 162nd <i>Carabinieri</i> Section (Military Police–MP) 54th Motorized Section 73rd Signal Company 12th Searchlight Section Assault Training and Replacement Unit (in October upgraded at group-level, incorporating the X Assault and Replacement Battalion, the XI Assault and Replacement Battalion and the <i>Bersaglieri</i> Replacement Battalion)</p>	
<p><u>1st Assault Division.</u> <u>Commander: Major General Ottavio Zoppi</u> 227th and 365th <i>Carabinieri</i> Platoons (MP) 16th Motorized Section 1769th, 1770th, and 178th Machine Gun Companies III <i>Bersaglieri</i> Battalion (cyclists) 5th Cavalry Squadron (<i>Cavalleggeri</i> di Piacenza) <u>1st Assault Groupment</u> 1st Assault Group (X, XX Assault Battalions and I <i>Bersaglieri</i> Battalion) 2nd Assault Group (XII, XIII Assault Battalions and VII <i>Bersaglieri</i> Battalion) 3rd Assault Group (XII, VII Assault Battalions and IX <i>Bersaglieri</i> Battalion) IX Mountain Artillery Battalion Trapani and Murge Brigades 37-mm cannon units* 91st Engineer Battalion 122nd Signal Company 70th Medical Section 75th Logistical Section 14th Motorized Section</p>	<p><u>2nd Assault Division.</u> <u>Commander: Major General Ernesto De Marchi</u> 406th and 409th <i>Carabinieri</i> Platoons (MP) 19th Motorized Section 317th, 279th, and 589th Machine Gun Companies XI <i>Bersaglieri</i> Battalion (cyclists) 6th Cavalry Squadron (<i>Cavalleggeri</i> di Piacenza) <u>2nd Assault Groupment</u> 4th Assault Group (XIV, XXV Assault Battalions and III <i>Bersaglieri</i> Battalion) 5th Assault Group (I, V Assault Battalions and XV <i>Bersaglieri</i> Battalion) 6th Assault Group (VI, XXX Assault Battalions and LV <i>Bersaglieri</i> Battalion) XII Mountain Artillery Battalion Taro and II <i>Bersaglieri</i> Brigades 37-mm cannon units* 92nd Engineer Battalion 71nd Signal Company 86th Medical Section 65th Logistical Section 17th Motorized Section</p>

Source: Salvatore Farina, *Le Truppe d'Assalto Italiane (The Italian Assault Troops)*, ed. Federico Cavallero (Milan, Italy: Edizioni Libreria Militare, 2005), 427. The reference to the 37-mm cannon units is from Basilio Di Martino and Filippo Cappellano, *I Reparti d'Assalto Italiani nella Grande Guerra (1915-1918) [The Italian Assault Units in the Great War (1915-1918)]*, vol. 1 (Rome, Italy: Stato Maggiore dell'Esercito in collaboration with Rodorigo Editore, 2016), 180-181.

⁵⁷¹ Di Martino and Cappellano, *The Italian Assault Units in the Great War (1915-1918)*, 1:160-161.

To close the picture on the *Arditi* organizational dimension, it is necessary to define two more points: how the assault units fit in the overall Army framework under an organizational perspective and what was their specific status compared with the other Army formations. Regarding the first, at the beginning of the war, the infantry branch included the following specialties: line infantry (conventional infantry and Grenadiers), specialized infantry (*Bersaglieri*), and special infantry (*Alpini* and *Bersaglieri* cyclist units).

Upon the activation of the *Arditi* units, the Organization and Mobilization Office of the Supreme Command placed them in the “special infantry” category.⁵⁷² Hence, since their birth, the assault units found a precise collocation inside the infantry branch and further thrived as a separate component with a precise set of tasks.⁵⁷³ In 1917, the *Arditi*’s mission set qualified them as the primary instrument in the Italian Army order of battle to break the impasse of trench warfare. However, after the reorganization of 1918, their role became more selective and limited to the most difficult actions in the offensive or defensive (counter-attacks).⁵⁷⁴

From the beginning, the Supreme Command’s directive *Equipment, armament and organizational structure of the assault battalions* categorized the assault battalions as permanent and autonomous units controlled by commands at the army echelon. In

⁵⁷² Di Martino and Cappellano, *The Italian Assault Units in the Great War (1915-1918)*, 1:403.

⁵⁷³ Rochat, *The Arditi of the Great War*, 31-32, 71-72.

⁵⁷⁴ *Ibid.*, 71-72.

addition, every outfit referred to an assigned mobilization depot for administrative and disciplinary matters.⁵⁷⁵

Along with the official designation of the *Arditi* units, the Supreme Command promptly defined also a special set of privileges for their members. With the directive *Treatment entitled to the personnel of the assault battalions*, dated July 5, 1917, the Organization and Mobilization Office decreed the concession of a hazardous duty pay, the exemption from every form of additional duty (trench, guard or *corvée*). Additionally, this document outlined a specific set of criteria for *Arditi*'s billeting and training facilities. Finally, the circular delegated to the corps commands the responsibility to establish procedures related to the attribution of rewards, in the guise of money, or leave.⁵⁷⁶ Albeit not specifically mentioned by the above-reported directive, as posited by Salvatore Farina, the privileges of the *Arditi* also comprised better and more abundant food rations.⁵⁷⁷

The choice of defining special privileges, even before regulating the new units' structure, could seem puzzling for a military institution that had shown low regard for

⁵⁷⁵ Di Martino and Cappellano, *The Italian Assault Units in the Great War (1915-1918)*, 1:87, 113-114. From April to June 1918, the assault battalions shifted under the control of commands at the corps level. The Supreme Command's project was to assign at least one assault unit for every army corps. However, the activation of the Assault Corps determined a change in this policy. In light of the impossibility of providing every corps with at least one battalion and because of the reassignment of 12 units to the assault divisions, the Supreme Command reverted to the original concept. Di Martino and Cappellano, *The Italian Assault Units in the Great War (1915-1918)*, 1:130. See also Rochat, *The Arditi of the Great War*, 65.

⁵⁷⁶ Di Martino and Cappellano, *The Italian Assault Units in the Great War (1915-1918)*, 1:66.

⁵⁷⁷ Farina, *The Italian Assault Troops*, 156. See also Pirocchi, *The Arditi*, 54.

such details in the previous two years of the war. However, it is likely that the Supreme Command grasped the potential the *Arditi* represented both on the operational and the motivational point of view. Regarding the latter, the assault battalions were a perfect “instrument of propaganda” among the ranks of the Italian Army.⁵⁷⁸ This was even truer after the debacle of Caporetto. In these circumstances, the *Arditi* assumed the political role of a “new breed of fighter,” unbent by the hardship of war, an important element of encouragement for the Italian people and the Italian soldiers.⁵⁷⁹ This idea also explains why the assault battalions’ special treatment persisted even after the reorganization of the Italian Army promoted by General Diaz in early 1918.⁵⁸⁰

The *Arditi*’s uniform and equipment further remarked their elite status. The reasons that led Bassi to design a different set of attires were mainly technical. Nonetheless, the new uniform quickly became a status symbol, together with the dagger, and the *Arditi*’s flashes and badge.⁵⁸¹ In respect to the equipment, the assault units’

⁵⁷⁸ Rochat, *The Arditi of the Great War*, 39.

⁵⁷⁹ *Ibid.*, 75.

⁵⁸⁰ *Ibid.*, 61-62.

⁵⁸¹ Rochat, *The Arditi of the Great War*, 39. The *Arditi*’s badge, designed by Bassi, was rather peculiar: a Roman gladius (symbolizing honor and courage), with an eagle-shaped pommel (symbolizing power), framed by an oak (symbolizing loyalty and strength) and a laurel twig (symbolizing victory). The two palms were tied with a Savoy knot to the hilt of the gladius, whose cross-guard displayed the Savoy House’s motto “Fert.” This badge was sewn on the left sleeve of the uniform, just under the shoulder, and came in different colors: gold for the officers, silver for the NCOs and black for the troopers. See Pirocchi, *The Arditi*, 73-79. See also Farina, *The Italian Assault Troops*, 86-89.

members were exempted from the use of the rucksack during combat operations. Albeit today this could seem strange, the soldiers of the time saw this a further privilege.⁵⁸²

In summary, the assault battalions' organizational structure was shaped after a set of requirements deriving from its tactical employment. This envisaged the combination of an organic fire support element and a maneuver element, the assault company. The last comprised both a support and a maneuver element, namely the specialist platoon and the attack platoons. The attack platoon leveraged both firepower and assault power through the integration of squads with different task-orientations, using the "buddy teams" as baseline elements of its tactical progression. The application of combat power necessary to breach the enemy obstacles, penetrate the enemy defensive system, and disrupt it in depth emerged from the integrated application of different capabilities. These, in turn, derived by the synergic collaboration of minor tactical elements that needed to use a specific array of weapons and equipment considering the different tasks they had to accomplish.

The Weapons and Equipment of the *Arditi*

In the memorandum *Establishment and employment of the submachine gun sections* (November 1916), Major Bassi introduced a peculiar array of weapons as a solution to break the stalemate of the trenches, in combination with the right training regimen and tactics. The concept expressed in the above-mentioned pamphlet revolved around the submachine guns as means to providing accompanying fire to the advancing

⁵⁸² Rochat, *The Arditi of the Great War*, 39-40.

assaulters. Moreover, the blend of carbine, grenade, and dagger emerged as the baseline equipment for all the *Arditi*.⁵⁸³

Bassi further refined the armament and the equipment of the new assault battalions, conducting a wide array of experiments, while he was at Russig and Sdricca di Manzano in early 1917. The criteria that he adopted was twofold. On the one hand, the new unit and his various components had to be able to express the right level of firepower. On the other hand, the equipment of the assault units had to be as light as possible. The purpose was to avoid an overburdening of the soldiers in battle, especially during the approach to the enemy positions.⁵⁸⁴

The distinctive array of weapons used by the *Arditi* was the result of Bassi's analysis and experimentation in training and combat. This combination included: carbine, dagger, grenades, submachine gun, heavy machine gun, mountain cannon (or trench mortar), and flamethrower.⁵⁸⁵ The first part of the review offered in this section of Chapter Four will synthetically touch every one of the above-listed weapons, also considering the armament introduced later in 1918. The second part of the section will give a brief description of some of the *Arditi*'s most peculiar pieces of equipment.

The tactical reality of the trenches relegated the use of the rifle at very short distances, if not point-blank, and as a close combat weapon with the bayonet fixed on it. This traditional "formula" was not at all effective in the dynamic and "intimate" fight that

⁵⁸³ Farina, *The Italian Assault Troops*, 410-413.

⁵⁸⁴ *Ibid.*, 76.

⁵⁸⁵ *Ibid.*

characterized the Great War. In these regards, the Italian Mannlicher-Carcano 1891 model rifle (6.5 millimeters) was too heavy (3.9 kilograms–8.6 pounds) and too cumbersome for the kind of use envisaged by Bassi for his assaulters. Moreover, when employed with the bayonet, it was difficult to swing and to employ to quickly dispatch the adversaries.⁵⁸⁶

For these reasons, Bassi rescinded the Army traditional “formula” in two separate items: the carbine or musket and the dagger.⁵⁸⁷ The first came in two variants: the musket ’91 TS (*Truppe Speciali*-Special Troops) or the cavalry musket ’91. Both were very similar. They maintained the same caliber of the model 1891 but were shorter and lighter.⁵⁸⁸ Nonetheless, these models retained the same ballistic characteristics at the short engagement distances of trench warfare.⁵⁸⁹ In addition, officers and machine gunners could bring a pistol, either a revolver or an automatic handgun.⁵⁹⁰

The dagger, instead, was an individual item that every *Ardito* brought in battle. The *Arditi* dagger derived from the modification of the bayonet of the old Italian Army

⁵⁸⁶ Farina, *The Italian Assault Troops*, 76-79.

⁵⁸⁷ *Ibid.*

⁵⁸⁸ The musket ’91 TS weighted 2.7 kilograms (5.9 pounds) for a length of 0.9 meter. The cavalry musket ’91 weighted 3.1 kilograms (6.8 pounds) for a length of 0.9 meter. Farina, *The Italian Assault Troops*, 76-79. See also Pirocchi, *The Arditi*, 85-86.

⁵⁸⁹ Farina, *The Italian Assault Troops*, 77.

⁵⁹⁰ The two main pistol models used by the *Arditi* were the heavy six-round 10.35-millimetre Bodeo revolver and the 9-millimeter Glisenti automatic handgun. Pirocchi, *The Arditi*, 86.

standard rifle Vetterli–Vitali model 1870.⁵⁹¹ The dagger’s greater maneuverability in hand-to-hand combat and its higher penetration power were the technical reasons for the choice of his weapons. Nonetheless, there were also psychological considerations behind its use. On the one hand, the training required to effectively use the dagger instilled in every soldier a high degree of self-confidence. On the other hand, the silent and abrupt kill associated with this weapon exercised a distinct psychological effect on the enemies in battle.⁵⁹² It was not uncommon for the *Arditi* to collect and use also the *Sturmmesser* dagger of their Austrian counterpart, the *Sturmtrupps*.⁵⁹³

Another distinctive weapon of the *Arditi* was the grenade. The Italian Army’s arsenal included a wide array of these explosive devices. However, Bassi chose to focus on two main models: the offensive Thévenot grenade (AL Type—400 grams—0.8 pounds) and the incendiary Thévenot grenade. The first was particularly effective because it was light and safe to use (differently from the defensive types). Nonetheless, it produced a wide projection of fragments and a loud detonation, facilitating a final assault with the dagger. The second, instead, allowed to conceal the *Arditi*’s advance with a dense smoke screen and was very effective to clear enemy dugouts and bunkers.⁵⁹⁴

⁵⁹¹ Pirocchi, *The Arditi*, 87.

⁵⁹² Farina, *The Italian Assault Troops*, 77.

⁵⁹³ Pirocchi, *The Arditi*, 88.

⁵⁹⁴ Farina, *The Italian Assault Troops*, 79-80. According to the historian Pirocchi, the *Arditi* also used another variety of grenades, both in the standard HE and incendiary variants. These were the offensive grenade Olergon and the incendiary grenade Olergon. Pirocchi, *The Arditi*, 88-89.

One of the main innovations related to the *Arditi* was the close integration of machine guns and artillery in the maneuver of the assaulters.⁵⁹⁵ Every assault battalion, at least at the beginning, fielded 24 9-millimeter FIAT-Revelli (model 1915) submachine guns, eight 6.5-millimeter FIAT-Revelli (model 1914) heavy machine guns and two 65-millimeter mountain cannons (model 6A).⁵⁹⁶

The first, in Farina's words, was an "unfortunate surrogate of a light machine gun."⁵⁹⁷ Albeit light (without the shield) and easy to operate, it was prone to jam after a few bursts. Moreover, given its high rate of fire (300 rounds per minute), it required a disproportionate amount of ammunition in combat.⁵⁹⁸ Nonetheless, this was the only weapon of this kind available to the units of the Italian Army. Therefore, with the typical ingenuity of the Italian soldier, Bassi devised specific modifications and a set of TTPs that allowed the use of this gun to provide close support by fire for the assaulters during combat.⁵⁹⁹

⁵⁹⁵ Pirocchi, *The Arditi*, 92.

⁵⁹⁶ *Ibid.*, 90.

⁵⁹⁷ Farina, *The Italian Assault Troops*, 80.

⁵⁹⁸ The FIAT-Revelli 15, also known as OVP (Officine Villar Perosa)-Revelli model 1915, was a double-barreled, magazine-fed submachine gun. The weapon was fed with two magazines, with 25 rounds for each magazine. This system had a theoretical range of 800 meters (875 yards) and it weighted 6.5 kilograms (14.3 pounds). The combat load for this submachine gun comprised 10,000 rounds (400 magazines), divided between the gunners and the ammunition bearers (six men in total). See Farina, *The Italian Assault Troops*, 81. See also Pirocchi, *The Arditi*, 90-91; Michael Duffy, "Encyclopedia: Villar Perosa Gun," *firstworldwar.com*, August, 22, 2009, accessed March 31, 2020, https://www.firstworldwar.com/atoz/mgun_vperosa.htm.

⁵⁹⁹ Bassi increased the effectiveness of the weapon by removing the heavy shield that came with it (28 kilograms–61.7 pounds), modifying the feeding mechanism and

The *Arditi*'s heavy machine gun was the 6.5-millimeter Fiat-Revelli model 1914.⁶⁰⁰ This was also the Italian Army standard-issue. However, after some unsuccessful tests of the weapon employment in the first waves, the Italian Army doctrine had relegated the weapon in the rear of the advancing infantry formations. In this position, the weapon could not provide an effective contribution because it could not keep pace with the infantry, given its weight and cumbersomeness. Bassi solved this problem by integrating the heavy machine gun fire support with the submachine gun role. More specifically, whereas the latter moved forward with the assaulters and provided suppressive fire, the former remained in suitable positions at the line of departure, granting precise neutralization or suppressive fire coordinated with pyrotechnics. Once the objective was taken, the heavy machine guns moved forward to dispense interdiction fire against any eventual enemy counter-attack force.⁶⁰¹

The heavy machine guns support by fire was, in turn, integrated with the assault battalions' organic mountain cannon section. This type of artillery was modular and

designing a bipod that allowed the gunner to operate it from every position, when either stationary or on the move. Farina, *The Italian Assault Troops*, 80-81.

⁶⁰⁰ The FIAT model 1914 was a water-cooled 6.5-millimeter heavy machine gun. It had an effective range of 1,600 meters (1,750 yards) and a theoretical rate of fire of 500 rounds per minute. It weighted 38.5 kilograms (84.9 pounds) and could be disassembled in two parts: the tripod (21.5 kilograms–47.4 pounds) and the weapon proper (17 kilograms–37.5 pounds). Its standard combat load included 20,000 rounds. Whereas 6,000 rounds were carried by the weapon team, the other 14,000 were transported with pack animals. See Farina, *The Italian Assault Troops*, 81-82. See also Pirocchi, *The Arditi*, 91-92; Michael Duffy, "Encyclopedia: FIAT-Revelli Gun," *firstworldwar.com*, August, 22, 2009, accessed March 31, 2020, https://www.firstworldwar.com/atoz/mgun_fiatrevelli.htm.

⁶⁰¹ Farina, *The Italian Assault Troops*, 126-127.

could be disassembled in four parts and transported with pack animals. Moreover, it had a rather advantageous effective range (6,500 meters–7,108 yards) and could employ both shrapnel and standard ammunitions. This cannon could neutralize weapon emplacements and pillboxes, so enabling the maneuver of the assaulters, that advanced “under the arch of the trajectories” of both the heavy machine guns and the considered field artillery pieces.⁶⁰² The contribution of the organic mountain cannon section was of the essence for the *Arditi*, because the Italian artillery arrived late in mastering the technique of the creeping barrage. Therefore, the degree of effective support that this could guarantee to the assault formations was limited. Furthermore, the organic artillery gave to the *Arditi* tactical commander the ability to cope with threats that, not detected during the initial reconnaissance, revealed themselves later in the enemy battle zone.⁶⁰³

⁶⁰² The 65/17 mountain cannon, also known as 65A, was a standard-issue weapon for the Italian mountain artillery units. Although it weighted 460 kilograms (1,014 pounds), it was modular and could be easily moved with pack animals or trucks. See Farina, *The Italian Assault Troops*, 82-83. See also Pirocchi, *The Arditi*, 91-92. It is important to remember that the official tables of organization and equipment approved by the Supreme Command in September 1917 did not envisage the allocation of this kind of cannon to the assault battalions. Instead, the document assigned six Bettica mortars to the assault outfits. This was an Italian-made 58-millemeter mortar that weighted 19 kilograms (41.9 pounds) and had an effective range of 150 meters (164 yards). The Italian Army fielded this mortar in 1916, to provide a less risky alternative for the destruction of the enemy obstacles, than the one represented by the use of pioneer sections. See Italo Cati, “*Il lancia-torpedini Bettica*” [“The Bettica Mortar”], *Bulletin of the Circolo Culturale Armigeri del Piave*, no. 131 (June 30, 1996): 45-50, accessed March 31, 2020, <http://www.armigeridelpiave.it/SELEZIONI/Lanciatorpedini.pdf>. Although during the course of 1917, the Second Army assault battalions enjoyed a wide latitude, thanks to the support provided by the Second Army Commander, General Capello, it is likely that not all the other assault battalions had the possibility of using the 65-millimeter cannons, reverting to the employment of the assigned Bettica mortars.

⁶⁰³ Farina, *The Italian Assault Troops*, 128-129.

After the reorganization of 1918 and the creations of the Assault Corps, the assault battalions ceded their mountain cannons to the divisional artillery battalion and gained one section of Stokes 76-millimeter mortars.⁶⁰⁴ Furthermore, every assault division received one supplementary field artillery unit with four 37F cannons to increase its organic fire support capabilities.⁶⁰⁵

The last weapon of the present review is the portable flamethrower. According to Farina, Lieutenant Colonel Bassi started to experiment with the integration of the flamethrowers in the *Arditi*'s arsenal following specific indications of the Supreme Command. The systems available to the assault battalions in 1917 were the French-made Schilt no. 3 bis (or their Italian version). This system had an effective range of 18 meters (19.6 yards) and was very effective in clearing fortified positions, entrenchments, and bunkers. Nonetheless, the *Arditi* mainly used it as a reserve weapon, due to its weight and cumbersomeness. For this reason, this weapon found minimal employment in the history of the *Arditi*.⁶⁰⁶

⁶⁰⁴ The assault battalions' new mortar section on Stokes included four weapons. This type of mortar was built in Italy under British license. It weighted a total of 40 kilograms (88 pounds) and could be disassembled in three parts for its transportation. It had an effective range of 800 meters (875 yards) and could fire different types of ammunition (high explosive, smoke or incendiary with either time or contact fuse). See Pirocchi, *The Arditi*, 92-93. See also Di Martino and Cappellano, *The Italian Assault Units in the Great War (1915-1918)*, 1:417.

⁶⁰⁵ The 37F cannon was a 37-millimeter gun, with a wheeled chassis. Albeit it weighted 72 kilograms (158.7 pounds), it was more mobile of the mortars, because it could be towed or pushed on the battlefield. It had an effective range of 600 to 1,500 meters (656 to 1,640 yards) and could fire only high explosive ammunitions. See Pirocchi, *The Arditi*, 93-94.

⁶⁰⁶ The Schilt no. 3 bis weighted 22 kilograms (48.5 pounds) without combustible. It had a capacity of 15 liters of incendiary mixture. In 1918, the Italian Army replaced it with an Italian-made model, the DLF (Direzione Lanciafiamme). This version had a

The assault battalions in the Great War trained with and used a piece of equipment, the electrical searchlight. The sources analyzed for the present research did not specify the exact model of this device, but report that it was portable and that could range significant distances. In night operations, the searchlight enabled the *Arditi* to mark targets for the heavy machine guns and mountain cannons, or, in alternative, to blind the defenders, while the assaulters approached in the cone of shadow created by the beam of the apparatus.⁶⁰⁷

Before moving further, it is appropriate to briefly illustrate the individual equipment and load-out used by the members of the assault battalions. The *Arditi* adopted a specific uniform, designed by Lieutenant Colonel Bassi to be simple and functional. The open-collar tunic had a loose-fitting form, to facilitate the movements of the assaulter on the battlefield and to avoid his overheating. It also sported a wide array of pockets to carry the individual load of grenades. For hygienic reasons, when available, the *Arditi* wore a grey-green wool sweater under the jacket instead of a shirt and tie. The pants were the comfortable knee-high model used by the mountain troops. Finally, the shoes were either mountain boots or low boots, with wool socks instead of puttees. The Italian Adrian helmet, the gas mask, and a light harness with two ammunition pouches and a haversack completed the assaulter kit that, overall, weighed about 7 kilograms (15.4

capacity of 12 liters and a weight of 25 kilograms (55.1 pounds), including the combustible. See Pirocchi, *The Arditi*, 92. See also Farina, *The Italian Assault Troops*, 83.

⁶⁰⁷ Farina, *The Italian Assault Troops*, 229-233.

pounds) less than the average Italian infantryman.⁶⁰⁸ In addition, the men of the “Green Flames” outfits, specialized in mountain warfare, were equipped with winter camouflaged uniforms and technical mountaineering materials, such as skis, crampons, and snowshoes.⁶⁰⁹

The individual weapon load-out differed depending on the specialization of the soldier in the assault company. To give an idea, the members of an assault squad carried a dagger, 12 to 20 grenades, and a wire cutter. The *Arditi* of an attack squad, instead, bore carbine with 72 rounds, dagger, 6 to 12 grenades each and trench tool. Finally, the soldiers of the submachine gun squad brought either submachine gun and pistol (gunners) or carbine with 72 rounds, four grenades, and a trench tool.⁶¹⁰ Overall, it is important to highlight that the unit commander, before every mission, decided the exact kit configuration, basing on terrain, weather, and the assigned task.⁶¹¹

In summary, the weapon array of the assault battalions sprouted from an initial concept devised by Lieutenant Colonel Bassi in his memorandum of November 1916. This envisaged the fusion of close combat and light automatic weapons in a section-level unit possessing an adequate amount of fighting and assault power to maneuver in a heavily entrenched battlefield. The further refinements defined by Bassi in the first

⁶⁰⁸ The *Arditi*'s tunic was a modified version of the jacket used by the *Bersaglieri* cyclist units (model 1910). Farina, *The Italian Assault Troops*, 84-86. See also Pirocchi, *The Arditi*, 73-76, 79-81.

⁶⁰⁹ Morisi, *Hell in the Trenches*, 202.

⁶¹⁰ Farina, *The Italian Assault Troops*, 97.

⁶¹¹ Pirocchi, *The Arditi*, 81.

months of 1917 led to the integration of the first concept, that more or less remained at the platoon level, with the fire support provided by heavy machine guns at the company level and mountain cannons at the battalion level. The development of the assault battalions' equipment was parallel with the fine-tuning of their tactics and training. The latter allowed the unit to perform in line with the desired tactics, maintaining the specialized teams of the battalion at a high level of combat effectiveness.

The Selection and Training of the *Arditi*

This section of Chapter Four will explore the recruitment process and the training method of the Italian assault units. Furthermore, it will illustrate the elements founding the unique and debated military culture of the *Arditi*. By and large, upon their inception, the assault battalions drafted their members from the infantry units of their parent corps.⁶¹² In October 1917, the Italian Supreme Command decided to open the recruitment also to the other combat branches (artillery, cavalry, and engineers), in light of the higher demand of applicants related to the necessity of creating more assault battalions.⁶¹³ Nonetheless, during the war, the Italian Army Staff more than once reminded its subordinate commands the importance of closely monitoring the process of recruitment of their assault battalions in trying to avoid an excessive impoverishing of their conventional battalions and regiments in terms of human resources.⁶¹⁴

⁶¹² Di Martino and Cappellano, *The Italian Assault Units in the Great War (1915-1918)*, 1:69-71, 82-85. See also Pirocchi, *The Arditi*, 56-57

⁶¹³ Di Martino and Cappellano, *The Italian Assault Units in the Great War (1915-1918)*, 1:96.

⁶¹⁴ *Ibid.*, 1:65, 96.

With these premises, a debated point of discussion regarding the assault units' recruitment focuses on the actual willingness of the soldiers to adhere to the initial selection process. On the one hand, multiple primary sources on the *Arditi*, such as Reginaldo Giuliani, report that the willingness of the recruit was an essential prerequisite for recruitment, describing forceful enrollments as an exception.⁶¹⁵ On the other hand, Farina posits that as the number of battalions to be activated grew, the number of volunteers decreased. More specifically, whereas for the I and II battalions, the enlisted volunteers were 50 percent of the total trainees, the ratio for the VI Battalion was only 10 percent.⁶¹⁶ Besides, it is likely that after Caporetto, in light of the propaganda promoted by the Supreme Command, the volunteers' rates started to rise again.⁶¹⁷ Overall, the best characterization of the *Arditi*'s recruitment system comes from the historian Giorgio Rochat: "in essence, the recruitment of the *Arditi* was of a mixed type, capable of reconciling at a variable degree selection from higher, individual inclinations and requirements of the military apparatus."⁶¹⁸

Without a doubt, this system reflected the conditions and the demands of that particular historical period. However, it also served the purpose of maintaining a balance in the expenditure of human resources dedicated to the assault outfits. Every army

⁶¹⁵ Reginaldo Giuliani, *Gli Arditi: Breve storia dei Reparti d'Assalto della Terza Armata* [*The Arditi: Short History of the Assault Units of the Third Army*], (Lavis, Italy: La Libreria Militare, 2017), 14-15.

⁶¹⁶ Farina, *The Italian Assault Troops*, 148-149.

⁶¹⁷ Pirocchi, *The Arditi*, 81. See also Rochat, *The Arditi of the Great War*, 42.

⁶¹⁸ Rochat, *The Arditi of the Great War*, 42.

commander gave his guidance for the routing of soldiers to the subordinate assault battalions. A good example is what happened with the Second Army during the initial activation of its assault units in 1917. According to General Capello's orders, every regiment had to provide 13 to 15 soldiers and one to two lance corporals. Moreover, every brigade was responsible for sending two corporals or sergeants. Finally, every division had to designate a variable number of NCOs of a rank higher than sergeant. An age limit was placed for the enlisted and corporal selectees (23 years of age). Additionally, all the applicants belonging to the various categories had to be single and to display uncanny physical and moral qualities.⁶¹⁹

The field army commander was also responsible for monitoring the flow of recruits and solving any issue deriving by an excessively conservative approach by the division, brigade, and regiment commanders. Taking the Second Army again as an example, in July 1917, some regiment commanders took advantage of the received orders to get rid of undesirable elements of their units. Unfortunately, these selectees, apart from not being volunteers, did not display the physical nor the moral requirements sought by Bassi and specified by General Capello in his orders. Therefore, informed of this fact, the Second Army Commander swiftly intervened, forcing the guilty regimental commanders to send a new batch of recruits to the school of Sdricca.⁶²⁰ Clearly, this system worked

⁶¹⁹ Farina, *The Italian Assault Troops*, 148-149. See also Di Martino and Cappellano, *The Italian Assault Units in the Great War (1915-1918)*, 1:82, 85, 91.

⁶²⁰ Di Martino and Cappellano, *The Italian Assault Units in the Great War (1915-1918)*, 1:77-78.

well as long as the field army commander was supportive of his subordinate assault battalions.

Different from enlisted and NCOs, the officers were almost exclusively volunteers.⁶²¹ Yet, the army and division-echelon commands retained the authority to approve the application packet of every individual officer.⁶²² Moreover, their selection and acceptance standards were significantly more restrictive than those of the other categories. Not only they had to be in excellent physical shape and possess previous operational experience, but they also had to be outstanding technical experts, especially regarding doctrine and the employment of automatic weapons and other kinds of support weapons. Most of all, they had to be naturally inclined to maintain composure and coldness in combat. In this regard, it was not uncommon for already qualified officers to be sent back to their previous units because they did not perform to standards during their first operation.⁶²³ This extreme attention to the figure of the officers most likely derived from the lack of a professional and prepared class of NCOs in the Italian Army during the war.⁶²⁴ Therefore, the junior officer became the first and foremost combat leader at the low tactical level, even if the enlisted and the NCOs of the assault battalion usually showed remarkable professionalism, aggressiveness, and discipline.

⁶²¹ Farina, *The Italian Assault Troops*, 150.

⁶²² Rochat, *The Arditi of the Great War*, 41.

⁶²³ Farina, *The Italian Assault Troops*, 150-151.

⁶²⁴ Pirocchi, *The Arditi*, 81.

The hypothetical recruitment of soldiers with a criminal record is another much-disputed point related to the *Arditi*. During the war, there was even a rumor on the assault battalions portraying those as “disciplinary units,” where people with legal issues went to seek redemption.⁶²⁵ The preclusions of soldiers guilty of common felony from the *Arditi* selection process, sanctioned by the Supreme Command, clearly shows that those rumors could not be accurate.⁶²⁶ However, as posited by Rochat, the assault battalions likely accepted candidates with charges, or pending judgment, for military crimes. For this category, service in the *Arditi* unit could be a way to obtain a reduction of punishment or even amnesty.⁶²⁷

The *Arditi* schools mitigated the issues deriving from a mixed recruitment system with a thorough selection process, aimed at screening the recruits under a physical, moral, and psychological point of view. More precisely, immediately after they arrived at the training facilities, the selectees underwent a series of gymnastic tests. Moreover, they also faced a “courage trial,” composed of different ordeals conducted to assess their ability to remain calm and detached in stressful situations. For example, one of those tryouts envisaged the observation of the recruits’ reactions when gathered in a bunker

⁶²⁵ Farina, *The Italian Assault Troops*, 148.

⁶²⁶ Farina, *The Italian Assault Troops*, 148. See also Di Martino and Cappellano, *The Italian Assault Units in the Great War (1915-1918)*, 1:91.

⁶²⁷ During the Great War, the Italian military legal system opened about 360,000 trials for military crimes, the most of which were focused on desertion or disobedience. In the gravest cases, the convict was put immediately to jail, whereas in the minor ones, the sentenced soldier was left to fight on the front line, with a postponement of the attributed punishment at the end of the conflict. Rochat, *The Arditi of the Great War*, 43. See also Di Martino and Cappellano, *The Italian Assault Units in the Great War (1915-1918)*, 1:116.

unexpectedly bombarded with live hand grenades.⁶²⁸ That being said, during the history of the *Arditi*, the number of human resources available did not always allow to enforce a high set of standards before the beginning of the initial training.⁶²⁹ However, the schools and the assault battalions always retained the authority to return any serviceman found wanting to their previous unit.⁶³⁰

With the main notions of the *Arditi*'s recruitment and selection process laid out, it is now possible to consider their training, an essential component of Bassi's concept. This officer realized the critical role of an adequate and realistic training method in developing those abilities needed to break the *impasse* of trench warfare, regardless of the equipment that soldiers had at their disposal.⁶³¹ The development of the Italian Army between 1915 and 1917, under General Cadorna, had been a clear example of this concept. In this period, the military organization acquired a wide variety of new weapons and equipment. Nonetheless, the overall performance of the Italian troops did not significantly change because the training was not adequately encouraged by the highest echelons of the army, nor it was effectively carried out by the troops.⁶³²

⁶²⁸ Farina, *The Italian Assault Troops*, 150, 168.

⁶²⁹ *Ibid.*

⁶³⁰ Rochat, *The Arditi of the Great War*, 42. See also Pirocchi, *The Arditi*, 57-58; Di Martino and Cappellano, *The Italian Assault Units in the Great War (1915-1918)*, 1:427.

⁶³¹ Farina, *The Italian Assault Troops*, 64-65.

⁶³² Di Martino and Cappellano, *The Italian Assault Units in the Great War (1915-1918)*, 1:367.

During World War I, the Supreme Command never established a common school for the assault units, even after the activation of the Assault Corps. The initial qualification training of the *Arditi* was the purview of the instructional camps established by each field army in 1917, and of the assault training and replacement battalions in 1918.⁶³³

The *curriculum* devised by Bassi directed both the initial qualifications of the recruits and the training activities of the assault battalions. This system had multiple objectives. First, it aimed at identifying the individual inclinations of the soldiers and assigning an appropriate specialization.⁶³⁴ Second, Bassi's program worked toward the conditioning of the soldiers to the chaotic and dangerous reality of the battlefield. Key to that was the execution of realistic exercises and drills with live ammunition, and the repetition of those actions in every situation and weather condition.

So, every *Ardito* developed a sort of "muscular and emotional memory," that kicked in during battle, granting an adequate level of performance.⁶³⁵ Clearly, the use of such methods could cause injuries or even deaths in training, but, without doubt, fewer than the ones sustained by the formations manning the trenches.⁶³⁶ Indeed, as reported by

⁶³³ Pirocchi, *The Arditi*, 61. See also Di Martino and Cappellano, *The Italian Assault Units in the Great War (1915-1918)*, 1:111, 356.

⁶³⁴ Farina, *The Italian Assault Troops*, 116-122.

⁶³⁵ *Ibid.*, 159-166.

⁶³⁶ Farina, *The Italian Assault Troops*, 175-176. See also Pirocchi, *The Arditi*, 67-68; Rochat, *The Arditi of the Great War*, 44.

Farina, the occurrence of small injuries during training was a perfect opportunity to practice “buddy-care” first aid TTPs.⁶³⁷

Third, the program devised by Bassi intended to increase the aggressiveness and the initiative of the trainees. The latter emerged from a very specific idea of discipline, radically different from the rigid and oppressive practices of the Italian Army. More accurately, this command philosophy appealed to the individual responsibility of the soldier, and to the importance of the mutual collaboration of leaders and subordinates to achieve the assigned objectives.⁶³⁸ Last, Bassi’s approach sought the improvement of the *Arditi*’s individual and collective fighting skills through the execution of a comprehensive program, combining physical, technical, and tactical training in a “crawl-walk-run” progression.⁶³⁹

The routine of an assault battalion was completely dedicated to training activities when they were not in operation. Every session usually began with physical functional exercises, including obstacle crossing and rope climbing in full equipment, dagger and bayonet fencing, hand-to-hand fighting, dummy grenade throwing, calisthenics, and even tactical swimming. At the end of the training day, the *Arditi* often practiced additional

⁶³⁷ Farina, *The Italian Assault Troops*, 159-166.

⁶³⁸ Farina, *The Italian Assault Troops*, 157-158, 175. See also Di Martino and Cappellano, *The Italian Assault Units in the Great War (1915-1918)*, 1:427-428; Rochat, *The Arditi of the Great War*, 37.

⁶³⁹ Farina, *The Italian Assault Troops*, 166-177. See also Di Martino and Cappellano, *The Italian Assault Units in the Great War (1915-1918)*, 1:349; Rochat, *The Arditi of the Great War*, 36-37; Pirocchi, *The Arditi*, 64-69.

sports activities of civilian nature, such as boxing, judo, wrestling, and hammer throwing.⁶⁴⁰

The individual technical preparation encompassed a wide variety of dry and live-fire exercises in the various fire ranges of the school, aimed at increasing the proficiency of every soldier according to his own specialty. The assaulters, for instance, focused on the static and dynamic use of the grenade and carbine in various shooting positions. Every soldier trained first alone and then with the respective “buddy.” Moreover, the machine-gunners executed a specific marksmanship progression, designed to enable the soldier to shoot with the assigned weapon from every position and in every condition.⁶⁴¹ Furthermore, every member of the unit learned to use various types of Austrian weaponry. The intent was to give the soldiers a further way to fight on with captured weapons if they finished all the ammunition in a real operation.⁶⁴² Finally, the *Arditi* of the “Green Flames” battalions also followed a specially designed mountaineering training supervised by mountain guides of great experience.⁶⁴³

The collective program consisted of a variety of drills executed both in dry and live-fire runs, at the squad, platoon, company, and even battalion level. Said drills covered the main essential task list of the unit, from trench clearing to neutralizing

⁶⁴⁰ Farina, *The Italian Assault Troops*, 166-171. See also Di Martino and Cappellano, *The Italian Assault Units in the Great War (1915-1918)*, 1:349; Pirocchi, *The Arditi*, 69.

⁶⁴¹ Farina, *The Italian Assault Troops*, 172-175. See Pirocchi, *The Arditi*, 64-66.

⁶⁴² Farina, *The Italian Assault Troops*, 174. See Pirocchi, *The Arditi*, 66.

⁶⁴³ Morisi, *Green Flames*, 13.

bunkers. Moreover, they were performed in a special training area with multiple mock-ups of Austrian defensive positions, built following the information provided by the Army Staff Intelligence Section. The execution of comprehensive live-fire exercises involving all the different components of the assault battalion represented the culmination of the individual preparation. These training evolutions were conducted in different weather and light conditions, in combination with the searchlight, and even wearing the gas mask. These events allowed every component of the battalion, down at the individual level, to fully understand and rehearse his role in the planning, preparation, and execution of a real operation.⁶⁴⁴

The training method and the instructional *curricula* initially devised by Lieutenant Colonel Bassi remained almost unchanged, even after the reorganization of the assault units of early 1918. However, with the disappearance of the schools, the successful execution of training activities rested more on the shoulders of the individual battalion commanders and significantly depended on the resources granted by their superiors, first and foremost, the shooting ranges.⁶⁴⁵ Finally, with the activation of the two assault divisions and the Assault Corps, the collective training events arrived to include large-scale maneuvers at the assault group and division level, both in dry and live-fire mode.

⁶⁴⁴ Salvatore Farina, describing his personal training experience in the *Arditi* during the Great War, asserts that in every full-dress live-fire exercise, the I Battalion expended 12,000 to 15,000 grenades, 30,000 to 40,000 carbine and machine gun rounds and 5,000 to 6,000 artillery and mortar rounds. This clearly gives an idea of the intensity of the *Arditi*'s training sessions, but also of the wide amount of resources they had at their disposal. See Farina, *The Italian Assault Troops*, 173-177. See also Di Martino and Cappellano, *The Italian Assault Units in the Great War (1915-1918)*, 1:348-349; Pirocchi, *The Arditi*, 66-68.

⁶⁴⁵ Rochat, *The Arditi of the Great War*, 62.

Of note, in August 1918, in the area between Padova and Vicenza, the entire corps conducted a complex force on force exercise (dry), with one division playing the role of the attackers and the other the role of the defenders. These evolutions were always followed by a thorough after-action review with all the unit commanders. This practice proved to be priceless in developing a closer integration and interoperability between the different assault battalions and the other units (cavalry and *Bersaglieri*) serving in the assault divisions.⁶⁴⁶

The training method developed and adopted by the assault battalions during the Great War was one of their main characteristics, and a key point underpinning their exploits in battle. Conducted always in the most realistic manner, it aimed at conditioning every soldier to the reality of the battlefield. Furthermore, the *Arditi*'s training system nurtured aggressiveness and discipline, while simultaneously increasing the technical and tactical skills of the unit members both at the individual and collective level. The essential role played by training in defining the superior performance of the *Arditi* units in comparison with the other conventional units was also recognized by General Grazioli at the end of the conflict.⁶⁴⁷

The challenging and aggressive nature of the *Arditi*'s training regimen, together with their peculiar role in combat, contributed to the affirmation of a unique military sub-culture, neatly distinct from the one typical of the other Italian formations. The *Arditi* officers and the Supreme Command widely encouraged this phenomenon. A strong esprit

⁶⁴⁶ Di Martino and Cappellano, *The Italian Assault Units in the Great War (1915-1918)*, 1:192-193, 196-197.

⁶⁴⁷ *Ibid.*, 1:258.

de corps was essential to maintain solid morale among those units and a high level of aggressiveness in battle. All things considered, from their inception, the assault battalions were expected to be fully self-sufficient in battle (except for the indirect-fire artillery support). The Supreme Command had conceived these units to operate alone, penetrating and disrupting the enemy defense, to hand over the seized objectives to other formations only in a second moment. Undoubtedly, the concession of unique privileges and incentives was also instrumental to this purpose.⁶⁴⁸

There were essentially two elements at the foundation of the assault units' esprit the corps. The first was a strong attachment to their professionalism that, in certain circumstances, resulted in an exasperated belief in their superiority, not only to the enemy but also to the other Italian servicemen. The second element was an almost lustful desire "to wage war and wage it properly."⁶⁴⁹ Most of the time, the combination of these factors translated into a flamboyant and thunderous manifestation of joy when a unit received a combat mission.⁶⁵⁰ However, in other cases, it gave rise to problems due to the exuberant and cocky behavior of the *Arditi* while off duty, especially with the Italian Army military police units, the *Carabinieri*. In this respect, the leadership abilities of the officers in the battalions were of the essence in containing the exuberance of their soldiers. The only way to lead this kind of formation was to gain respect and trust of the soldiers, not a

⁶⁴⁸ Rochat, *The Arditi of the Great War*, 38-40.

⁶⁴⁹ *Ibid.*, 74.

⁶⁵⁰ *Ibid.*, 40.

simple deed for every officer by far.⁶⁵¹ Notwithstanding some incidents that occurred off duty, the *Arditi* never gave any sort of problem in combat.

The privileges and the autonomy proper of the assault battalions gave birth to a wide array of exaggerated reports and rumors, creating a sort of “black legend,” that would have accompanied the assault battalions until the end.⁶⁵² The case related to the battalions of the Second Army during the withdrawal of Caporetto is a perfect example of this concept. In these difficult circumstances, the *Arditi* were among the few units that remained intact and fought back. The I Battalion was almost completely decimated defending the city of Udine. Yet, after the end of this tragic chapter of Italian military history, those units were accused of acts of looting and vandalism.⁶⁵³

As offered by Di Martino and Cappellano, the official documents available effectively confirm the existence of disciplinary problems in the ranks of the assault battalions. However, these sources also highlight the degree of distortion that the real facts suffered and testify the wide array of initiatives carried out by the various unit commanders in mitigating these issues.⁶⁵⁴ Albeit unfounded, the negative reputation

⁶⁵¹ Di Martino and Cappellano, *The Italian Assault Units in the Great War (1915-1918)*, 1:192-193, 427-428.

⁶⁵² Di Martino and Cappellano, *The Italian Assault Units in the Great War (1915-1918)*, 1:427-428. See also Pirocchi, *The Arditi*, 99-103.

⁶⁵³ Di Martino and Cappellano, *The Italian Assault Units in the Great War (1915-1918)*, 1:192-193, 427-428.

⁶⁵⁴ *Ibid.*, 1:428.

associated with the *Arditi* formations during the war significantly contributed to their demise at the end of the hostilities.⁶⁵⁵

In the framework of the Italian Army's reorganization of 1918, the Supreme Command continued to support the *Arditi* and nurture their esprit de corps for pragmatic reasons. Considering the more effective contribution that the infantry branch could provide in trench warfare at this stage of the war (a consequence of significant improvements in training and equipment), the assault battalions had two main roles. On the one hand, these units represented a small and effective reserve component that the Supreme Command could employ in any difficult situation.⁶⁵⁶ On the other hand, the *Arditi* were an excellent subject for Italian wartime propaganda. They exemplified the "the swift and efficient assaulter, consecrated to the offensive and the final victory."⁶⁵⁷ The men of the assault battalions provided a vivid example to spur and revitalize the common Italian soldier, oppressed by the harsh and monotonous life of the trenches and dejected by the catastrophic defeat of Caporetto. Moreover, the *Arditi* could provide a suitable model to retain the trust and faith of the Italian people after the debacle.⁶⁵⁸

In summary, during the Great War, the Italian Command established a mixed recruitment system for the assault battalions. This tried to harmonize the requirement of elite formations, with balanced management of the human resources available. In turn,

⁶⁵⁵ Di Martino and Cappellano, *The Italian Assault Units in the Great War (1915-1918)*, 1:257-258.

⁶⁵⁶ Rochat, *The Arditi of the Great War*, 75.

⁶⁵⁷ *Ibid.*

⁶⁵⁸ *Ibid.*, 74-75.

the *Arditi* developed an innovative selection and training method, designed to build the mission-essential capabilities required for the operational units to accomplish the tasks assigned by the Army. These envisaged the autonomous conduct of raids and attacks, following the principles of infiltration and disruption in depth, based on tactics significantly different from the ones of the other infantry units at the beginning of the conflict.

The *Arditi* in Battle

The last section of this chapter will illustrate the combat tactics adopted by the *Arditi*, focusing on the assault battalion. At the onset of World War I, Italian doctrine favored frontal attacks conducted in multiple densely-packed waves on infantry, supported by an initial artillery barrage that usually shifted towards the enemy rear before the advance of the attacking elements. The Italian tactics bore a striking resemblance with the French ones, yielding the same ineffective results in a battlefield dominated by entrenched positions defended with machine guns and artillery.⁶⁵⁹

The Italian infantry units relied exclusively on the rifle to build the local fire superiority needed to transition to a final assault with the bayonet, seen as the final act of every engagement.⁶⁶⁰ Heavy machine guns and submachine guns did not find a synergic integration in the infantry frontal maneuver, remaining relegated to the rear. The role of these weapons usually did not yield significant effects, considering the impossibility of

⁶⁵⁹ Farina, *The Italian Assault Troops*, 130-131.

⁶⁶⁰ Farina, *The Italian Assault Troops*, 77-79. See also Di Martino and Cappellano, *The Italian Assault Units in the Great War (1915-1918)*, 1:46.

keeping up with the advancing echelons.⁶⁶¹ Hand grenades were not adequately exploited by the infantrymen, mostly due to the lack of specific TTPs and suitable training.⁶⁶² The contribution of the artillery was limited to the execution of long preparation barrages aimed at neutralizing the enemy obstacles and defensive positions.

This employment of the artillery did not guarantee positive results. First, it compromised any attempt to achieve battlefield surprise before an attack. Second, this kind of bombardment was not sufficient to decisively weaken the defenders that found cover in dugouts and fortified positions. Last, the lack of coordination and the habit of shifting the artillery fire in depth before the infantry advance allowed the enemy to recognize the beginning of an attack and use the time to deploy out of their shelters to resist it. During the first two years of the war, the Italian artillery units increased the consistency and quality of their weapon systems and perfected their TTPs taking inspiration from those employed on the Western Front. However, they were never able to effectively reproduce the *barrage roulant* technique due to inherent technical limitations.⁶⁶³

Lieutenant Colonel Bassi, drawing from the experiences matured in the trenches and taking advantage of a thorough experimentation, devised an innovative set of tactics, destined to alter the way the Italian infantry fought. First and foremost, the idea of

⁶⁶¹ Farina, *The Italian Assault Troops*, 125-126.

⁶⁶² Farina, *The Italian Assault Troops*, 123-124. See also Di Martino and Cappellano, *The Italian Assault Units in the Great War (1915-1918)*, 1:343.

⁶⁶³ Farina, *The Italian Assault Troops*, 128. See also Di Martino and Cappellano, *The Italian Assault Units in the Great War (1915-1918)*, 1:27-28, 330; Thompson, *The White War*, chap. 19.

identifying and neutralizing the key elements of the enemy defense system replaced the notion of overwhelming the adversary with rigid waves of infantry. Second, the pursuit of fire superiority disappeared in favor of the disruption of the enemy defenses through a combination of surprise, synchronized fire support, and close combat. In this way, the adversary was deprived of the advantage granted by the entrenchments, machine guns, and artillery.

Third, the assault lost its frontal aspect and relied more on a flexible maneuver of multiple squads on the flanks and rear of the main defensive elements inside the enemy entrenched sector. Fourth, the fire support available, both organic and attached, assumed the role of accompanying the assault, not just preparing it. Last, the exploitation of surprise became a critical prerequisite to attaining successful results with a minimal expenditure of resources.⁶⁶⁴

Therefore, the new TTPs considered any possible way to achieve surprise. This could be reached orienting the initial supporting artillery bombardment to cover a wider frontage, including sectors adjacent to the one selected for the penetration. Moreover, a correct synchronization of the barrage shifts with the assaulters' progression allowed the *Arditi* to strike at the defenders while they were still seeking cover inside their dugouts.

An alternative solution could be trading the initial barrage with the use of specially-designed charges (obtained from a 58-millimeter mortar round) to breach the enemy obstacle zone and initiate the attack. The choice of the weakest point to breach

⁶⁶⁴ Farina, *The Italian Assault Troops*, 130-135.

and the right timing (decided upon the target's daily routine) also contributed significantly to achieve surprise.

Finally, the assault battalions became very proficient in adopting certain "tricks" designed to disorient the enemy and maximize the effect of surprise. The first was the conduct of night attacks in combination with the searchlight. The strong beam of this device was able to temporarily blind, or in any case distract, the adversary, giving time to the squads to maneuver. Another expedient was the use of smoke grenades *en masse*, to induce the enemy to think they were under a gas attack, so creating further disruption in the defenders' ranks.⁶⁶⁵

Having laid out the main principles composing the *Arditi*'s tactical concept, it is now possible to give more context by illustrating the tactics used by the assault battalions. The Italian assault units were conceived and developed to carry out a specific offensive mission set, including raids and attacks. The latter could entail the seizure of limited objectives inside a specific sector or the penetration and disruption of the entire adversarial defensive system to reach targets in the rear of the opposing formations. Although the initial founding directive of the Supreme Command also envisaged the employment of the assault battalions as spearheads of other formations, this type of mission still implied an independent action. The *Arditi* battalions operated alone to seize the assigned objectives and, only at a later time, they handed over the conquered

⁶⁶⁵ Farina, *The Italian Assault Troops*, 128-130, 135-141.

positions to follow-on infantry units.⁶⁶⁶ During the retrograde of Caporetto and the Battle of the Solstice, the *Arditi* also performed security and defensive tasks, such as rearguard, delay or local counter-attacks.⁶⁶⁷ The analysis proposed in this section will focus mainly on the offensive tactics of the assault battalions, those being their *raison d'être*. More precisely, the following paragraphs will consider the TTPs adopted in attack operations, subsequently describing by exception those typical of raids.

Every type of offensive operation was always preceded by extensive planning and preparation. These two phases were indeed critical because they allowed the assault battalions to set the right conditions to achieve surprise and to establish suitable coordination measures with the other units *in loco*. Every time the *Arditi* were forced to operate without proper planning and preparation, they suffered significant setbacks, considering their light assets and the specialized nature of their outfit.⁶⁶⁸

The planning phase usually opened with the receipt of an order by the parent command and the acquisition of as much information as possible on the enemy from different sources, such as aerial observation and photography, the respective field army HQ intelligence section, and the commanders responsible for the sector where the objectives were located. The battalion also used to conduct preemptive reconnaissance

⁶⁶⁶ Farina, *The Italian Assault Troops*, 141-142, 144 and 251. See also Di Martino and Cappellano, *The Italian Assault Units in the Great War (1915-1918)*, 1:67, 72-73; Rochat, *The Arditi of the Great War*, 31-32, 50.

⁶⁶⁷ Di Martino and Cappellano, *The Italian Assault Units in the Great War (1915-1918)*, 1:97-102, 118.

⁶⁶⁸ Farina, *The Italian Assault Troops*, 141-142, 144. See also Pirocchi, *The Arditi*, 110-111.

and surveillance operations to confirm the data already available and possibly to gather more. A proper information collection was critical in understanding the composition, disposition, and strength of the enemy units, depth, frontage and possible weak spots of their defenses, the location of command posts, pillboxes and main fortifications, the daily routine of the defenders, and the ethnic composition of the units manning the adversarial trenches. The last two requirements were particularly useful to predict any possible enemy reaction. For instance, the *Arditi* knew that the time windows in which the Austrian rotated their sentinels, or when they served food, were particularly favorable for the attack. Moreover, they were aware that, when facing Slovenian or Croatian units, they had to expect stiffer and more ferocious resistance, considering the strong aversion these nations nurtured for the Italian soldiers.⁶⁶⁹ The planning phase ended with a detailed order. This included a general concept of operation with precise tasks for the maneuver and supporting units, scheme of fires, type of equipment and ammunition to employ, and coordinating measures with the supporting artillery units and infantry follow-on formations. This order, once approved by the tasking agency, was shared with all the actors involved in the attack.⁶⁷⁰

The preparation phase started with the execution of rehearsals, whenever possible, using realistic mock-ups of the positions to assault.⁶⁷¹ Furthermore, it included the

⁶⁶⁹ Farina, *The Italian Assault Troops*, 138-139, 144-145. See also Pirocchi, *The Arditi*, 110-111.

⁶⁷⁰ Farina, *The Italian Assault Troops*, 143, 145-146.

⁶⁷¹ See also Pirocchi, *The Arditi*, 110-111; Di Martino and Cappellano, *The Italian Assault Units in the Great War (1915-1918)*, 1:67.

deployment of the units to the planned staging area, where they conducted the final coordination with the formations on site. This last part was conducted in the utmost secrecy, to safeguard operational surprise.⁶⁷²

The formation of choice in a deliberate attack was the assault company or the assault battalion, depending on the consistency and the nature of the target.⁶⁷³

Notwithstanding the actual size of the assault force, its maneuver revolved around the attack platoons and the subordinate squads. In larger battalion-size operations, the actual frontage to be assaulted was divided into company sectors. In turn, every assault company assigned sub-sectors to their subordinate platoons. The typical battalion formation envisaged two companies abreast in the fire echelon, whereas the company usually deployed with two platoons abreast in fire echelon, one in the second echelon covering one flank and the other in the third echelon covering the opposite flank. Furthermore, every platoon usually arranged three maneuver squads in fire echelon, with the assault squad in the center. The submachine squad trailed behind, in the middle of the formation.⁶⁷⁴

The attack could start with a short and intense artillery barrage, provided by non-organic indirect-fire artillery units, aimed at pounding the enemy forward lines and creating breaches in the obstacles.⁶⁷⁵ To retain surprise, the initial bombardment spanned

⁶⁷² Farina, *The Italian Assault Troops*, 146.

⁶⁷³ *Ibid.*, 144.

⁶⁷⁴ *Ibid.*, 108, 114-115.

⁶⁷⁵ Farina, *The Italian Assault Troops*, 129. See also Morisi, *Hell in the Trenches*, 203.

over the areas adjacent to the targeted portion of the adversarial lines.⁶⁷⁶ As an alternative to a preparation barrage, the operation could commence with the creation of gaps in the enemy obstacles through the detonation of multiple demolition charges, laid down by the sappers of each assault company. After that, the supporting artillery suppressed enemy front trenches, as described above. Following the initial barrage, the artillery repeatedly shifted to different preplanned target sets. Coordination with the forward echelon units was maintained with pyrotechnics.

When the first assaulters were about to reach the foremost enemy trenches, the non-organic artillery reverted to counter-battery fire and suppression of the enemy dugouts and fortifications in the battle zone,⁶⁷⁷ using a mix of high explosive and gas shells. As the assault squads progressed inside the battle zone, the artillery focused further on the rear, targeting command posts, reserve units' dugouts, while keeping up

⁶⁷⁶ Farina, *The Italian Assault Troops*, 128-129.

⁶⁷⁷ The method of the elastic defense in depth, conceived by the German Army, but also used by the Austrian one since mid-1916, envisaged three subsequent areas of defense, articulated in depth. The foremost zone, called outpost zone, extended for 500 to 1,000 meters in depth and was usually defended by an infantry battalion. Its function was to provide early warning, contain enemy raids and disrupting the first waves of attackers. The middle area, known as main battle zone, developed for 1,500 to 3,000 meters in depth. It served the purpose of attriting the assaulting forces, leading to their culmination. An infantry battalion defended the battle zone, emplaced in a series of dispersed and camouflaged entrenchments and pillboxes. Lastly, the rearmost area, designed as rearward zone, housed the defenders' artillery units, a reserve battalion and other support elements. The main trench system was between the outpost and the battle zone and was called main line of resistance. A secondary trench line marked the boundary between the battle and the rearward zone and was called artillery protective line. See Morisi, *Hell in the Trenches*, 29. See also Lupfer, *The Dynamics of Doctrine*, 14-18.

with counter-battery fire.⁶⁷⁸ In Farina's words, the role of the supporting artillery was to provide "accompanying fire at the standard safety distance." This translated in a preemptive preparation and suppression of the next sector in depth that the *Arditi* were about to attack.⁶⁷⁹

Before describing the maneuver of the attack platoons in detail, it is appropriate to illustrate the role of the heavy machine guns and organic mountain cannons. Those elements filled the void between the external artillery barrage and the assaulter positions, executing suppressive or neutralization fires on the flanks of the friendly formations and on specific enemy elements threatening the advance of the *Arditi* (such as pillboxes or weapons emplacements). This type of support was more responsive than the one provided by non-organic artillery and was very effective in coping with threats that had not been identified during the initial reconnaissance. In company-size operations, the company commander controlled the heavy machine gun team and the cannon section. In battalion-level actions, the battalion commander controlled the field artillery organic element, while every company employed its organic heavy machine gun teams. All the coordination was mainly conducted by visual means (pyrotechnics), even if the *Arditi* also trained to do it on "time hack" when the visibility conditions were scarce.⁶⁸⁰

⁶⁷⁸ Farina, *The Italian Assault Troops*, 129, 146. See also Morisi, *Hell in the Trenches*, 203.

⁶⁷⁹ Farina, *The Italian Assault Troops*, 129.

⁶⁸⁰ Farina, *The Italian Assault Troops*, 113-115, 126-130, 146, 177. See also Morisi, *Hell in the Trenches*, 203.

Having outlined the role of the organic and non-organic fire support elements in the assault, it is now possible to consider the actions of the attack platoon and its subordinate squads. After the initial opening of the attack, the platoon crossed the line of departure and advanced through no man's land, covered by artillery fire. Arriving at the foremost trenches, the platoon executed the break-in. First, the assault squad pushed through the gaps in the enemy obstacles, backed-up by elements of the company sapper squad if needed. Its task was to dispatch forward sentinels and small reserve elements while cutting telephone lines. After that, the squad members fanned out across the platoon sector and took control of the main dugouts entrances and trenches, working in pairs, in defiladed and elevated positions above along the rim of the trenches. This technique allowed them to contain any adversarial reaction and to bottle-up entire enemy squads as they tried to exit their shelters and spread in the trenches.⁶⁸¹

The two attack squads of the platoon trailed behind the assault squad, progressively taking over the foremost positions, and overwhelming the defenders. This allowed the assault squad to further push forward to neutralize the main defensive elements of the outpost area, that, in the meantime, were pounded by organic and non-organic fire support. The attack squads continued to trail the assault squad, enabling the execution of flanking or envelopment maneuver against positions that offered a stiffer resistance. The submachine gun squad brought up the rear of the platoon formation, providing suppressive fire, as needed.⁶⁸²

⁶⁸¹ Farina, *The Italian Assault Troops*, 104-108, 112.

⁶⁸² *Ibid.*, 105-107.

Once the outpost zone was taken, the platoons in the first echelon moved on to seize the main battle zone. The platoons in the second and third echelons trailed behind and cleared the outpost zone. During the advance in the buffer belt between the outpost and battle zones, the fire echelon platoons assumed the same formation initially adopted to cross no man's land. The only exceptions were their assault squads that assumed front security. Supported by the *Arditi* sappers, the assaulters also reconnoitered and breached the gaps to access the subsequent defensive zone. Once the platoon was inside the main battle zone, it seized the zone by using the same sequence illustrated in the previous paragraphs.⁶⁸³

After the achievement of the main objectives of the attack, the assault force consolidated in a hasty defense, rounded up all prisoners, and sent them back with their own wounded. In this phase, the submachine gun team took up positions on the flanks, interlocking their fields of fire with the ones of the adjacent platoons. Its task was now to provide interdiction fire against any enemy unit attempting to counter-attack. In the meantime, the attack squads provided attack by fire, and the assault squad stood by to counter-assault any adversarial formation that came too close. The company heavy machine guns and the battalion cannons closed in on the seized positions, to contribute to the hasty defense with interdiction fires. Finally, the supporting non-organic artillery continued to focus on counter-battery duties. It also fired a box barrage, aimed at isolating friendly positions and preventing any enemy countermove. Finally, after the

⁶⁸³ Farina, *The Italian Assault Troops*, 105-107.

consolidation in a hasty defense, the assault units waited for the “hand-over take-over” with the follow-on formations.⁶⁸⁴

Raids were quick and violent offensive actions envisaging the penetration of the enemy lines to harass the defending garrison, destroy significant equipment and installations, or to capture prisoners and documents. Moreover, this kind of operation could also include the capture of predetermined terrain features to rectify the front line or to enable further operations. Finally, raids could also represent a good way to divert enemy attention from other sectors before a large-scale attack. The unit of choice for this kind of operation was the assault company or the attack platoon, reinforced with heavy machine gun and mountain artillery elements. The *Arditi* usually conducted raids in low visibility conditions, at dusk, dawn, or during the night. Considering the level of the forces involved and the short duration of this action, the attainment of surprise and timely coordination between all the parties involved were even more critical than in standard attack operations. The tactics adopted in these circumstances were the same as those employed in larger attacks, even if the assigned targets were rarely located more than 250 to 300 meters behind the enemy’s first defensive line. Most of the time, a raid ended with the withdrawal of the assault force back to the safety of friendly positions.⁶⁸⁵

⁶⁸⁴ Farina, *The Italian Assault Troops*, 106-115.

⁶⁸⁵ *Ibid.*, 104, 107, 141-144.

Conclusion

The *Arditi* represent one of the most productive chapters of military innovation in the history of the Italian Army during the 20th century.⁶⁸⁶ This military unit was born out of a combination of different inputs, internal and external to the Italian military institution. First, the Italian assault battalions owed much to the multiple initiatives promoted by organizational and senior leaders between the onset of the Great War and 1917, in response to the necessity to find suitable methods to cope with the unsettling reality of trench warfare. Without a doubt, General Grazioli and Lieutenant Colonel Bassi offered the most relevant contribution to the establishment and development of the *Arditi*,⁶⁸⁷ but the support they received from their superiors, especially General Luigi Capello, was also very important to pave the way in a military establishment that was traditionally unreceptive to the establishment of special units.⁶⁸⁸ Furthermore, although the experiments conducted in the first two years of the war did not reach the same level of innovation and effectiveness as the *Arditi*,⁶⁸⁹ they surely contributed to taking the tactical debate to the right level for the Italian Army in June 1917.

⁶⁸⁶ Di Martino and Cappellano, *The Italian Assault Units in the Great War (1915-1918)*, 1:257.

⁶⁸⁷ Farina, *The Italian Assault Troops*, 61, 68.

⁶⁸⁸ Di Martino and Cappellano, *The Italian Assault Units in the Great War (1915-1918)*, 1:36, 45-46, 63.

⁶⁸⁹ *Ibid.*, 1:16, 18, 24, 28, 32.

Second, the rise of the Austrian *Sturmtrupps* threat provided an initial model to inspire the *Arditi* concept.⁶⁹⁰ Most of all, this created the right sense of urgency in the Supreme Command to accept the idea of authorizing permanent special formations.⁶⁹¹ Last, the institutional development of a specific tactical doctrine recognizing the importance of small unit actions certainly played his role. When General Capello proposed the activation of the assault battalions in June 1917, the Supreme Command heeded his suggestion because it provided an instrument that responded to the Army's institutional requirements of that period.⁶⁹²

The *Arditi* units were born and further grew as a separate specialty infantry branch, with distinct organization, equipment, training, and tactics. They introduced innovative concepts that had been insofar absent from the Italian Army reality. First, their training methods brought forth unparalleled attention to functional physical fitness, individual specialization, and collective integration of the various subcomponents, shaped by a realistic and intensive regimen.⁶⁹³ Indeed, the *Arditi*'s training method was not dissimilar from the ones currently in use by the various military institutions around the world.⁶⁹⁴ Second, the organizational model and the peculiar set of tactics of the assault

⁶⁹⁰ Rochat, *The Arditi of the Great War*, 31.

⁶⁹¹ Di Martino and Cappellano, *The Italian Assault Units in the Great War (1915-1918)*, 1:63-64.

⁶⁹² *Ibid.*, 1:53.

⁶⁹³ Rochat, *The Arditi of the Great War*, 36-37. See also Di Martino and Cappellano, *The Italian Assault Units in the Great War (1915-1918)*, 1:347-348.

⁶⁹⁴ Rochat, *The Arditi of the Great War*, 37.

battalions presented rather innovative principles, such as the combined arms approach and the idea of infiltration maneuver.⁶⁹⁵ that replaced the firm reliance on the infantry close-order linear maneuver, supported by artillery fire.

In this way, the *Arditi* could give an important contribution to the Italian efforts during the Great War.⁶⁹⁶ They contributed directly with their feats of arms, scoring some significant successes throughout the conflict, even if with their own limitations and failures. At first, in 1917, the assault units constituted the “preferred instrument for the resolution of the offensive problem” in the Italian military institution. Later, after the reorganization of the Italian Army, they lost this privileged status, but still retained an important role among the Italian forces.⁶⁹⁷ The advent of the assault divisions and the Assault Corps marked the transformation of the *Arditi* from a specialized outfit for offensive operations at the low tactical level to a maneuver component at higher echelons, with the integration of mobile formations. This concept could find a partial realization later, during the final offensive of Vittorio Veneto.⁶⁹⁸

The *Arditi* also indirectly contributed to the positive outcomes of the Italian forces in the Great War in two ways. First, they represented an example for the other soldiers to

⁶⁹⁵ Morisi, *Hell in the Trenches*, 204, 209. See also Di Martino and Cappellano, *The Italian Assault Units in the Great War (1915-1918)*, 1:78.

⁶⁹⁶ Rochat, *The Arditi of the Great War*, 11.

⁶⁹⁷ *Ibid.*, 71.

⁶⁹⁸ Dechigi, “Presentation,” 6.

follow, especially after the tragic facts of Caporetto.⁶⁹⁹ Second, the innovative training and tactical concepts of the assault battalions positively informed the reorganization of the Italian military instrument at the beginning of 1918.⁷⁰⁰

At the end of the Great War, the *Arditi*'s atypical concept of discipline, source of abundant rumors and false myths, and their progressive politicization showed by the staunch adhesion of some of his soldiers to the Futurist movement, triggered a robust reactionary response by the Italian military institution. This backlash, combined with the lack of a precise role for this kind of formations in peacetime, finally led to their demise.⁷⁰¹ The initial intention of the Italian Army strategic leadership was to infuse the innovative concepts typical of the assault battalions' tactics and training in the infantry branch. Ultimately, this did not happen. Even worst, the Italian infantry formations reverted to the same standards they had before the war.⁷⁰² In the interwar period, there were some attempts of former *Arditi* officers to focus the attention of the Army on the doctrinal breakthroughs of the assault battalions,⁷⁰³ but the Italian Army Staff aligned

⁶⁹⁹ Rochat, *The Arditi of the Great War*, 39, 74-75. See also Di Martino and Cappellano, *The Italian Assault Units in the Great War (1915-1918)*, 1:360-361.

⁷⁰⁰ Di Martino and Cappellano, *The Italian Assault Units in the Great War (1915-1918)*, 1:360-361.

⁷⁰¹ Di Martino and Cappellano, *The Italian Assault Units in the Great War (1915-1918)*, 1:257-267. See also Rochat, *The Arditi of the Great War*, 125-130; Pirocchi, *The Arditi*, 121-125.

⁷⁰² Rochat, *The Arditi of the Great War*, 131. See also Di Martino and Cappellano, *The Italian Assault Units in the Great War (1915-1918)*, 1:258.

⁷⁰³ The book *Le Truppe d'Assalto Italiane (The Italian Assault Troops)* was an attempt of Salvatore Farina to recall the innovations in the training and doctrinal domains of the *Arditi*, through an objective and detailed account of his experience. He wrote this volume in the 1930s, when the Italian military institution was adopting a model of static

more and more with the concepts of the methodical battle of the French Army.⁷⁰⁴

Notwithstanding, the bulk of the *Arditi* veterans seemed more worried about the recognition of their merits during the war to gain credit in the newly-born Fascist movement, rather than the establishment of a military school of thought capable of maintaining the *Arditi* school's precepts alive in Italian doctrine.⁷⁰⁵

Ultimately, the *Arditi* tradition survived in some of the first examples of Italian special operations forces units during the Second World War: the 10th *Arditi* Regiment and the *Alpini Sciatori* (Ski) Battalion "Monte Cervino." Today, those traditions still live in the units of the Italian Army Special Operations Command.

and defensive warfare similar to the French one. See Federico Cavallero, "Introduction to the Present Edition," in Farina, *The Italian Assault Troops*.

⁷⁰⁴ Rochat, *The Arditi of the Great War*, 131.

⁷⁰⁵ *Ibid.*

CHAPTER 5
A COMPARATIVE ANALYSIS OF THE GERMAN
AND ITALIAN ASSAULT UNITS

There were many cases where the non-German assault units attained the same standard of efficiency and ferocity as their German counterparts. The effect of non-German assault units on the tactics of the ordinary infantry of their respective armies, however, was negligible. While the French *grenadiers d'élite* were conducting trench raids not unlike those of German stormtroopers, the ordinary French infantry was learning to rely more and more on week-long bombardments. The same can be said for the Italians, who copied the French doctrine of attrition while ignoring the experience of the own *arditi*.

–Bruce I. Gudmundsson, *Stormtroop Tactics:
Innovation in the German Army (1914-1918)*

The fifth chapter of the present work will focus on the comparative analysis of the German *Sturmtruppen* and the Italian *Arditi*. After the description of both outfits in chapters Three and Four, this comparison is critical to frame the phenomenon of tactical innovation of the Italian assault units in the renowned standards set by the German Army in the international military literature. This will allow the modern military professional to better appreciate the nature of the Italian *Arditi*, including their strengths and weaknesses, in the process of change faced by the European military organizations during World War I.

The Italian *Arditi* shared multiple uncanny similarities with their German counterparts regarding their origin, organization, equipment, training, and tactics. However, the Italian assault units stood distinctly apart in relation to one aspect: the institutional role of this outfit in the overall military system. Whereas the German *Stosstruppen* were born and developed first as an instructional unit with secondary combat tasks, the Italian *Arditi* rose and grew as a “pure” combat outfit. As offered in Chapter

Four, they exercised a partial influence on the tactics and training of the conventional formations in the reorganization of the Italian Army of 1918. Nonetheless, this was merely a byproduct of the *Arditi* “experiment,” conveniently exploited by General Armando Diaz and the Italian Supreme Command in a moment of need. The divergence in the institutional functions of the compared outfits is relevant because it determined a different extent of change in the entire military organization during and after the conflict.

Origin and History

The *Arditi* and the *Sturmtruppen* were the product of their respective military institutions’ adaptation to the new reality of trench warfare. Both units rose out of the requirement to overcome the *impasse* of a battlefield precluding maneuver at the tactical and operational levels.⁷⁰⁶ Furthermore, the embryonic form of the German and the Italian assault units matured around the experimentation of new weapon systems in the attempt to break the stalemate of the trenches. In the case of the *Sturmtruppen*, the German High Command (*die Oberste Heeresleitung-OHL*) first activated *Sturmabteilung* Kalsow to test and *Sturmkanone* (assault cannon) and develop suitable tactics, techniques, and procedures (TTP) for its employment.⁷⁰⁷ Similarly, the foundations of the Italian assault

⁷⁰⁶ House, *Toward Combined Arms Warfare*, 19, 22, 34-35; Lupfer, *The Dynamics of Doctrine*, 2; Gudmundsson, *Stormtroop Tactics*, 43-44; Bull, *Stosstrupptaktik*, chap. 1, Kindle; Rochat, *The Arditi of the Great War*, 11; Pirocchi, *The Arditi*, 9; Morisi, *Hell in the Trenches*, v, Kindle; Di Martino and Cappellano, *The Italian Assault Units in the Great War (1915-1918)*, 1:118; Dechigi, “Presentation,” 5.

⁷⁰⁷ Gudmundsson, *Stormtroop Tactics*, 46. See also Samuels, *Doctrine and Dogma*, 22.

battalion concept point back at the memorandum titled *Establishment and employment of the submachine gun sections*, written by Major Giuseppe Bassi in November 1916.⁷⁰⁸

The development of the *Arditi* and the *Sturmtrupps* was part of a process of “horizontal innovation,”⁷⁰⁹ combining experiences and ideas devised and shared spontaneously between units at the low tactical level, and coalesced into an informal doctrine that was later accepted, and implemented by the parent military institution. Looking at this aspect, in both cases, the personal contribution of visionary military officers decisively influenced the developmental path of the newly-conceived outfits.

On the German side, Captain Rohr represented the key facilitator in the growth and affirmation of the *Sturmbataillone*.⁷¹⁰ Nonetheless, the critical support of his superiors and key high ranking members of the German Army provided him with the necessary resources and the latitude needed for the task at hand. As offered by Gudmundsson, the backing of Lieutenant Colonel Max Bauer (head of the Operations Section of the General Staff), Crown Prince Wilhelm, and First Quartermaster General Erich Ludendorff was critical for keeping the *Sturmtrupps* project on track until its full realization.⁷¹¹

⁷⁰⁸ Farina, *The Italian Assault Troops*, 65-66. See also Pirocchi, *The Arditi*, 21; Morisi, *Hell in the Trenches*, 196-197; Di Martino and Cappellano, *The Italian Assault Units in the Great War (1915-1918)*, 1:37-40.

⁷⁰⁹ Foley, “A Case Study in Horizontal Military Innovation,” 803, 821.

⁷¹⁰ Gudmundsson, *Stormtroop Tactics*, 47.

⁷¹¹ *Ibid.*, 83-84, 173.

Looking at the Italian side, without a doubt, Major Bassi represented a central figure in the development and affirmation of the Italian assault battalions. Not incidentally, the historian Farina depicts him as the “founder” of the *Arditi*.⁷¹² Also in this case, the support furnished by high ranking members of the Italian Army was essential for the full development of the Italian assault units. More precisely, the backing of Major General Francesco Saverio Grazioli (as Commander of the 48th Infantry Division) and General Luigi Capello (Commander of the Second Army) proved to be key in the officialization of the assault battalions in June 1917.⁷¹³ Furthermore, General Grazioli was directly responsible for the devising and implementation of the Assault Corps, later in 1918.⁷¹⁴

Apart from the above-mentioned similarities, the *Arditi* units followed a different developmental path from the German *Sturmtruppen*. There are two main reasons for this. First, the army staffs of the respective armies had different visions and requirements, driving the implementation of these projects. On the one hand, the OHL established the *Stosstruppen* with a primary role entailing the experimentation of new TTPs and their diffusion in the military institution.⁷¹⁵ The German assault units’ expansion of 1916, after

⁷¹² Farina, *The Italian Assault Troops*, 56. See also Di Martino and Cappellano, *The Italian Assault Units in the Great War (1915-1918)*, 1:118-119; Rochat, *The Arditi of the Great War*, 35.

⁷¹³ Farina, *The Italian Assault Troops*, 68, 71. See also Rochat, *The Arditi of the Great War*, 35; Di Martino and Cappellano, *The Italian Assault Units in the Great War (1915-1918)*, 1:67-68; Morisi, *Hell in the Trenches*, 198.

⁷¹⁴ Di Martino and Cappellano, *The Italian Assault Units in the Great War (1915-1918)*, 1:151-155. See also Farina, *The Italian Assault Troops*, 178.

⁷¹⁵ Gudmundsson, *Stormtroop Tactics*, 47.

the Verdun campaign, was a consequence of the OHL's desire not to renounce the instructional role of the *Sturmabteilung*, despite the excellent results obtained through its direct employment in combat. Therefore, the German Army increased the assault unit's capacity by upgrading Rohr's detachment to assault battalion and establishing a second assault battalion.⁷¹⁶ Later, in October 1916, General Ludendorff went even farther, ordering the creation of one *Sturmabteilung* for each army-level command. His idea was to exploit the *Sturmtruppen* to increase the level of effectiveness of the German Army units in pursuit of an "a return to the war of grand maneuvers" on the Western Front.⁷¹⁷ The creation of the German assault divisions (*Angriffsdivisionen*) at the beginning of 1918 was the last step of the *Sturmtruppen* project, following a logic that led to the growth of the whole Army.⁷¹⁸

On the other hand, in June 1917, the Italian Supreme Command activated the assault battalions as a "pure" combat outfit.⁷¹⁹ They were structured to operate autonomously in an offensive role that did not necessarily envisage the integration with conventional infantry units.⁷²⁰ Upon the reorganization of 1918, the assault formations

⁷¹⁶ Samuels, *Doctrine and Dogma*, 23. See also Gudmundsson, *Stormtroop Tactics*, 77-80.

⁷¹⁷ Gudmundsson, *Stormtroop Tactics*, 84. See also Samuels, *Command or Control?*, 241; Lupfer, *The Dynamics of Doctrine*, 43-44.

⁷¹⁸ Gudmundsson, *Stormtroop Tactics*, 151. See also Lupfer, *The Dynamics of Doctrine*, 48.

⁷¹⁹ Di Martino and Cappellano, *The Italian Assault Units in the Great War (1915-1918)*, 1:67.

⁷²⁰ Rochat, *The Arditi of the Great War*, 38-39. See also Morisi, *Hell in the Trenches*, 304.

remained an arm of the infantry branch tasked with limited, yet critical, responsibilities, although they lost the status of “privileged instrument for the resolution of the offensive problem.”⁷²¹ Finally, with the birth of the Assault Corps, the Italian Army chose to replicate the successful concept of the assault battalions at a higher organizational level.⁷²² In essence, throughout their history, the *Arditi* rose and evolved as a fighting unit.

The second reason why the *Arditi* and the *Stosstrupps* developed differently is related to the organizational and operational context that engendered them. On the German side, the *Sturmabteilungen* were a product of the marked decentralization of the army, combined with the *Jäger* and the *Pionier* traditions. Moreover, they felt the effects of the rigorous mindset of the German officer class in regards to self-education.⁷²³ Differently from the French and British armies, the German Army featured a decentralized system where the officers at low levels of command were entitled to make independent tactical and administrative decisions.⁷²⁴ For instance, subordinate officers were entirely responsible for the training of their men, and their career progress depended heavily on the results of their units in training and combat.⁷²⁵ Furthermore, the German military education inculcated in the minds of the Army officers the habit of questioning

⁷²¹ Rochat, *The Arditi of the Great War*, 71.

⁷²² Di Martino and Cappellano, *The Italian Assault Units in the Great War (1915-1918)*, 1:67.

⁷²³ Gudmundsson, *Stormtroop Tactics*, 173.

⁷²⁴ *Ibid.*

⁷²⁵ Samuels, *Doctrine and Dogma*, 107.

and studying every aspect of the military profession, especially tactics and operational art. This combination of factors was the “magic formula” that enabled a quick adaptation to the German military institution in World War I.⁷²⁶ The further interaction of the first two elements with the *Jäger* and *Pionier* cultures, promoted by Captain Rohr, provided a “fast track” for the German tactical evolution.⁷²⁷

According to Gudmundsson, the contribution of the pioneers in the development of the assault battalions was an important yet unsung one. In his words: “While German tactics would most likely have evolved in the direction they did without the help of the Assault Battalions, the work of the German pioneers gave the infantry an initial impetus that should not be discounted.” The pioneer units provided a marked innovative edge for different reasons. First, they were already used to working in small teams, so this positively affected the decentralization in the assault units down at the squad level. Second, they were experts in siege warfare, and this fact, without a doubt, helped the devising of proper solutions in trench warfare. Third, the pioneers conceived battle as a dangerous business, where the ability to do things effectively and efficiently was the manifestation of true martial prowess. In this respect, they were immune to the “cult of the *arme blanche*,” affecting infantry and cavalry officers. Last, pioneers were less influenced by the pre-war infantry tactics and training methods, because their drills were

⁷²⁶ Gudmundsson, *Stormtroop Tactics*, 173-176.

⁷²⁷ *Ibid.*, 176-177.

not so focused on infantry notions as the ones of the standard line units. Therefore, the pioneers had “fewer habits to break.”⁷²⁸

On the Italian side, the *reparti d’assalto* sprouted from the convergence of the Italian infantry tradition, the additive effects of the individual experiments made in 1915-1916, and the Austro-Hungarian *Sturmtrupps* model. First, the *Arditi* soldiers were initially drafted exclusively from infantry units, with a predilection for *Bersaglieri* units.⁷²⁹ Only in October, when the *Arditi* concept had consolidated, the Supreme Command gave the possibility of enlisting in the *Arditi* to all the combat branches of the Army.⁷³⁰ The different cultures of the infantry specialties (line infantry, *Bersaglieri*, and *Alpini*) constituting the various assault battalions probably also gave some slightly different nuances to the units themselves. The “Green Flames” battalions are a clear example of that, with the development of specific TTPs for mountain warfare.⁷³¹ In addition, the main contributor to the birth of the *Arditi*, Major Bassi, was an infantry officer with considerable experience to his credit.⁷³² Moving to the second point, in 1915-1916, the Italian Army saw the execution of a wide array of experiments at the army-echelon aimed at finding new tactical solutions to trench warfare. As offered in the first part of Chapter Four, these experiments did not reach the same level of effectiveness

⁷²⁸ Gudmundsson, *Stormtroop Tactics*.

⁷²⁹ Di Martino and Cappellano, *The Italian Assault Units in the Great War (1915-1918)*, 1:65.

⁷³⁰ *Ibid.*, 96.

⁷³¹ Morisi, *Green Flames*, 8, 13.

⁷³² Farina, *The Italian Assault Troops*, 56-57.

attained by the assault battalions.⁷³³ and envisaged the constitution of specialized sub-units in the framework of the ordinary infantry formations.⁷³⁴ The fact that commanders at a comparatively low echelon had the latitude to conduct these tests, in the first place, highlights a significant level of decentralization also in the Italian Army.⁷³⁵ The results of this process of experimentation did undoubtedly contributed to orient the Italian innovation efforts, setting the conditions for the rise of the *Arditi*. However, these practices did not suffice to engender the final concept of assault battalions.⁷³⁶ Last, the Austro-Hungarian *Sturmtrupps* idea, deriving from the German *Stosstrupptaktik*,⁷³⁷ represented a critical ingredient in the birth of the Italian assault formations because it “provided both a model and a stimulus” for the Italian Army.⁷³⁸ Ultimately, the Italian *Arditi* evolved in a unique concept,⁷³⁹ standing apart from the German one in some specific areas, especially at the organizational level.

⁷³³ Di Martino and Cappellano, *The Italian Assault Units in the Great War (1915-1918)*, 1:16, 18, 24, 28, 32.

⁷³⁴ Rochat, *The Arditi of the Great War*, 27-28.

⁷³⁵ Gudmundsson, *Stormtroop Tactics*, 173.

⁷³⁶ Rochat, *The Arditi of the Great War*, 28.

⁷³⁷ Gudmundsson, *Stormtroop Tactics*, 88.

⁷³⁸ John Gooch, *The Italian Army and the First World War* (Cambridge, UK: Cambridge University Press, 2014), 201, quoted in Morisi, *Hell in the Trenches*, 299, Kindle. See also Rochat, *The Arditi of the Great War*, 31; Di Martino and Cappellano, *The Italian Assault Units in the Great War (1915-1918)*, 1:57, 63.

⁷³⁹ Rochat, *The Arditi of the Great War*, 28-32.

Organizational Structure

Comparing the *Stosstrupps* and the *Arditi* under the lens of the organizational structure, there are certain similarities. However, there are also some distinct differences, essentially deriving by the two different approaches that the respective high commands maintained in establishing the considered outfits. As already offered, the OHL was seeking a solution to increase the tactical effectiveness of the military organization, with the secondary requirement of supplementing the ordinary formations in combat.⁷⁴⁰ On the contrary, the Italian Supreme Command conceived and established the assault battalions as a separate arm of the infantry branch, destined to operate autonomously on the battlefield.⁷⁴¹

The different approaches held by the two military institutions under examination are immediately evident from the organizational nature of the respective assault formations. Whereas the *Sturmabteilungen* were provisional units, the Italian assault battalions were permanent ones. On the one hand, the OHL established the *Sturmabteilung* first and the *Sturmabteilungen* later, chiefly as a means to test, develop, and spread new TTPs in the framework of the German Army. Once the process was over, they were disbanded in light of their redundancy. In this respect, the use of the term “planned obsolescence” by Gudmundsson is fitting.⁷⁴² On the other hand, the Italian

⁷⁴⁰ Samuels, *Doctrine and Dogma*, 22. See also Samuels, *Command or Control?*, 240.

⁷⁴¹ Rochat, *The Arditi of the Great War*, 31-32. See also Di Martino and Cappellano, *The Italian Assault Units in the Great War (1915-1918)*, 1:68, 403; Morisi, *Hell in the Trenches*, 304.

⁷⁴² Gudmundsson, *Stormtroop Tactics*, 86-87.

Supreme Command created the *Arditi* battalions as permanent units, with their own dedicated infantry depots, their colors, a specific connotation in the army order of battle, and a defined table of organization and equipment.⁷⁴³

Comparing the force structure of the German and Italian assault battalions, once again, it is undeniable a certain degree of similarity. First, both units combined infantry companies with a robust combat support component.⁷⁴⁴ Second, the German and Italian assault units contained a significantly higher number of automatic weapons than conventional infantry formations.⁷⁴⁵ Last, both outfits featured organic artillery and mortars, not initially present in the tables of organization and equipment of the ordinary battalions.⁷⁴⁶

⁷⁴³ Di Martino and Cappellano, *The Italian Assault Units in the Great War (1915-1918)*, 1:58, 86-87, 111, 113-114, 403.

⁷⁴⁴ For the German assault battalions, see Samuels, *Doctrine and Dogma*, 27-28. See also British War Office, *Handbook of the German Army in War, April 1918*, 47. Regarding the Italian assault battalions, see Farina, *The Italian Assault Troops*, 90-92. See also Di Martino and Cappellano, *The Italian Assault Units in the Great War (1915-1918)*, 1:87.

⁷⁴⁵ For the German assault battalions, see Gudmundsson, *Stormtroop Tactics*, 48, 77. See also Samuels, *Doctrine and Dogma*, 18, 27-28. Regarding the Italian assault battalions, see Farina, *The Italian Assault Troops*, 91. See also Di Martino and Cappellano, *The Italian Assault Units in the Great War (1915-1918)*, 1:403-405; Rochat, *The Arditi of the Great War*, 38.

⁷⁴⁶ In 1917, both the German and Italian Army changed the organizational tables of the standard infantry battalions, integrating light mortar sections or platoons (January 1917 for the Germans and October 1917 for the Italians). For the German assault battalions, see Gudmundsson, *Stormtroop Tactics*, 77-78, 95-96, 159. Regarding the Italian assault battalions, see Farina, *The Italian Assault Troops*, 91. See also Di Martino and Cappellano, *The Italian Assault Units in the Great War (1915-1918)*, 1:403-405.

Notwithstanding the above-listed similarities, the force structure of the German and Italian assault battalions differed in terms of internal organization along a line defined by their employment criteria. In the German case, the *Sturmataillon* was larger than its Italian counterpart (1,400 soldiers versus 937).⁷⁴⁷ and also maintained infantry assault companies homogeneously composed of assault squads, with separate combat support companies or sections.⁷⁴⁸ It is likely that the assault companies received organic light machine guns only in 1917, like the rest of the German infantry formations.⁷⁴⁹ This internal arrangement makes sense for a unit designed to support and supplement other infantry formations in battle.⁷⁵⁰ In these circumstances, the German *Sturmtruppen* usually adopted a task organization method, aggregating a variable number of infantry squads and supporting elements (machine gun squads, flamethrowers squads, and grenade launchers) in *Sturmblöcke* (assault blocks).⁷⁵¹

⁷⁴⁷ For the German assault battalions, see Samuels, *Doctrine and Dogma*, 28. Regarding the Italian assault battalions, see Farina, *The Italian Assault Troops*, 91. See also Di Martino and Cappellano, *The Italian Assault Units in the Great War (1915-1918)*, 1:413. It is significant to point out that the two Italian references report different numbers. Farina, portraying the “Bassi’s” model, specifies an overall strength of 734 men, whereas Di Martino and Cappellano, depicting the Supreme Command’s official model, maintain 937 soldiers. Nonetheless, the numbers reported are well below the total strength of the German assault battalion (1,400 men) posited by Samuels.

⁷⁴⁸ Samuels, *Doctrine and Dogma*, 28.

⁷⁴⁹ Gudmundsson, *Stormtroop Tactics*, 99-100.

⁷⁵⁰ The only exception to this rule was the execution of raids. In light of the limited scope of this kind of offensive action, the task organization could include only storm troopers, not considering the external artillery support. Gudmundsson, *Stormtroop Tactics*, 182.

⁷⁵¹ U.S. Army War College, *German and Austrian Tactical Studies*, 111. See also Samuels, *Doctrine and Dogma*, 51; Gudmundsson, *Stormtroop Tactics*, 142, 159.

On the Italian side, the assault battalion was a unit designed to be autonomous in combat, except for the external artillery support.⁷⁵² The distribution of the automatic and support weapons inside the battalion structure reflected this requirement. In the initial model devised by Bassi, the assault company was the basic level of employment. For this reason, it incorporated four attack platoons and one specialist platoon. The former included an assault squad, two attack squads, and one submachine gun squad. The latter provided the company commander with additional capabilities, such as heavy machine guns, sappers, and signallers.⁷⁵³

In turn, all the squads were structured on “buddy teams,” considered as the minimal maneuver block on the battlefield.⁷⁵⁴ The only combat support element external to the assault company was the battalion cannon or mortar section, under the control of the battalion commander.⁷⁵⁵ The innovative idea of the “buddy system” and the internal differentiation of roles at the company level represent, without a doubt, an element of

⁷⁵² Farina, *The Italian Assault Troops*, 91-92.

⁷⁵³ *Ibid.*, 104-115.

⁷⁵⁴ *Ibid.*, 101-104.

⁷⁵⁵ The initial model devised by Bassi, and largely followed by the assault battalions in 1917 envisaged the employment of mountain cannons and not trench mortars. However, the official table approved by the Supreme Command listed a section of six trench mortars instead of the cannon sections. Notwithstanding the weapons employed, the control of this fire support section was responsibility of the battalion commander in battalion-level operations. Farina, *The Italian Assault Troops*, 93. See also Di Martino and Cappellano, *The Italian Assault Units in the Great War (1915-1918)*, 1:87.

distinction from the German counterpart that revolved around the assault squad as the fundamental component of *Stosstrupptaktik*.⁷⁵⁶

With the reorganization of 1918, the Italian assault battalions acquired a configuration more akin to the German *Sturmataillon*. First, all the heavy machine gun sections converged in a machine gun company under the battalion.⁷⁵⁷ Second, the company lost the specialist platoon, the peculiar characterization of its component squads, and the official recognition of the “buddy teams.”⁷⁵⁸ Last, all the submachine gun squads at the company level coalesced into two sections of four weapons each.⁷⁵⁹

The assignment of flamethrower units represented a further point of divergence between the German and the Italian assault formations. In the first case, those elements were attachments provided by the *Garde Reserve Pionier Bataillon*.⁷⁶⁰ In the second case, flamethrower sections were organic to the battalions themselves.⁷⁶¹

The last main difference between the Italian assault battalions and the *Sturmataillon* was the management and integration of replacements. On the Italian

⁷⁵⁶ Gudmundsson, *Stormtroop Tactics*, 19. See also Samuels, *Doctrine and Dogma*, 51; Balck, *Development of Tactics—World War*, 85.

⁷⁵⁷ Di Martino and Cappellano, *The Italian Assault Units in the Great War (1915-1918)*, 1:131-132, 404, 418. See also Pirocchi, *The Arditi*, 117.

⁷⁵⁸ Farina, *The Italian Assault Troops*, 276. See also Pirocchi, *The Arditi*, 117.

⁷⁵⁹ Di Martino and Cappellano, *The Italian Assault Units in the Great War (1915-1918)*, 1:87, 102, 109, 403, 413.

⁷⁶⁰ Samuels, *Doctrine and Dogma*, 28. Gudmundsson, *Stormtroop Tactics*, 44-45, 84-85.

⁷⁶¹ Farina, *The Italian Assault Troops*, 113. See also Di Martino and Cappellano, *The Italian Assault Units in the Great War (1915-1918)*, 1:87.

part, the fourth company of each battalion, named the replacement company, retained this function.⁷⁶² Later in 1918, upon the reorganization of the Italian assault units, the battalion-level formations lost their organic replacement companies. However, the creation of assault training and replacement battalions at the army echelon filled this gap. These elements assumed the responsibility for training recruits and rallying convalescent soldiers to feed the operational battalions.⁷⁶³

On the German side, the sources consulted did not report detailed information regarding the *Stosstrupps'* replacement system. Gudmundsson posits that the *Sturmataillone* had to draw their replacements from the depots of other units because they were not permanent formations in the German order of battle.⁷⁶⁴ Furthermore, Samuels maintains that, in May 1918, each assault battalion on the Western Front set up its own Field Recruit Depot, to train and incorporate new soldiers.⁷⁶⁵ According to Samuels, this was sufficient to satisfy the needs of the German assault outfits in terms of human resources.⁷⁶⁶ Nevertheless, the information available suggests that the German *Sturmataillone* never had an autonomous and dedicated replacement system, at least not until the end of the conflict.

⁷⁶² Farina, *The Italian Assault Troops*, 92-93.

⁷⁶³ Di Martino and Cappellano, *The Italian Assault Units in the Great War (1915-1918)*, 1:112, 115. See also Rochat, *The Arditi of the Great War*, 65.

⁷⁶⁴ Gudmundsson, *Stormtroop Tactics*, 79.

⁷⁶⁵ Samuels, *Doctrine and Dogma*, 29-30.

⁷⁶⁶ *Ibid.*, 30.

Going beyond the sphere of the assault battalions, there are three points to consider before closing this section: the “non-official” assault formations, the assault units at echelon above battalion, and the status of the assault units in the respective institutions.

In addition to the assault battalions, both the German and Italian armies maintained unofficial assault outfits at the regimental or battalion level. Trained and equipped on the pattern of the official shock troops, these units represented a useful instrument at the disposal of the lower level commanders in the execution of offensive operations, especially when the assault battalions were not involved. In the German Army, numerous regiments autonomously started to establish these particular outfits well before the activation of the *Sturmabteilung* Kalsow.⁷⁶⁷ This phenomenon significantly increased in 1916, after the OHL ordered each army on the Western Front to send officers and NCOs to the existing assault battalions’ quarters for training in trench warfare.⁷⁶⁸ Later, in 1917, most of these units converged in the assault battalions that every army created on the behest of General Ludendorff.⁷⁶⁹ However, most likely, the infantry battalions and regiments kept some sort of unofficial assault unit even after.⁷⁷⁰

The unofficial *Sturmtrupps* found substantial employment in attacks with limited objectives and trench raids. The majority were not a permanent subordinate element of

⁷⁶⁷ Gudmundsson, *Stormtroop Tactics*, 91.

⁷⁶⁸ *Ibid.*, 80-81.

⁷⁶⁹ Gudmundsson, *Stormtroop Tactics*, 84.

⁷⁷⁰ Gudmundsson, *Stormtroop Tactics*, 101-102. See also Jünger, *Storm of Steel*, 183-184, 266, 269.

the respective battalion or regiment. Instead, their members reunited for specific missions and training sessions, going back to their parent companies once they accomplished the assigned task. This prevented an excessive draining of qualified and skilled soldiers from the ordinary line formations.⁷⁷¹

In the Italian Army, the first examples of unofficial assault units were the result of the various experiments made at the army echelon in 1915 and 1916. This practice took root at the battalion and regimental level in March 1917, with the publication of the circular no. 6230.⁷⁷² With this document, General Luigi Cadorna, Chief of Staff of the Army, spread the available information regarding the Austrian *Sturmtruppen*.

His intent was twofold. First, he wanted to sensitize the lower level commanders on the nature of the new threat, giving them a level of awareness to better contrast it. Second, Cadorna strongly encouraged his subordinates to adopt similar TTPs every time there was the opportunity to do so.⁷⁷³ After the activation of the assault battalions, a large number of soldiers, NCOs, and officers selected for the regimental assault formations converged in the new outfits.⁷⁷⁴ Nevertheless, the various infantry regiments kept on employing small platoon-level elements of regimental *Arditi*, incorporating the personnel with some previous specialization training that did not enlist in the assault battalions.

⁷⁷¹ Gudmundsson, *Stormtroop Tactics*, 91.

⁷⁷² Di Martino and Cappellano, *The Italian Assault Units in the Great War (1915-1918)*, 1:58-62.

⁷⁷³ Di Martino and Cappellano, *The Italian Assault Units in the Great War (1915-1918)*, 1:57.

⁷⁷⁴ *Ibid.*, 1:69-72, 79.

In the Italian case, the Supreme Command initially forbade the infantry regiments to constitute permanent assault platoons in their ranks. The idea behind that was to prevent the excessive depletion of the ordinary infantry companies.⁷⁷⁵ In June 1918, the Supreme Command changed its guidance, authorizing the permanent establishment of 40-man regimental *Arditi* platoons, trained and equipped similarly to the assault battalions. Later, the Supreme Command went as far as endorsing the constitution of these outfits for the *Alpini* battalions and the Marines Regiment.⁷⁷⁶ The regimental *Arditi* platoons provided every commander with specialized assault capabilities to use in his routine activities. In late 1917, the *Arditi* school of Sdricca di Manzano offered 12-day training courses for the cadre of the regimental platoons of the Second and Third armies, spreading the TTPs perfected by Bassi in the meantime.⁷⁷⁷ The regimental platoons represented a joining link between the assault battalions and the ordinary infantry regiments, useful in mitigating the lack of a consistent instructional role of the *Arditi*.⁷⁷⁸

Considering the establishment of assault formations at echelons above battalion, it is possible to delineate another major difference between the German and Italian armies, derived from the different approaches the two military institutions adopted regarding their assault units. On the German side, at the beginning of 1918, the OHL upgraded 56 of the 195 infantry divisions in the order of battle to assault divisions

⁷⁷⁵ Ibid., 1:86-87, 132.

⁷⁷⁶ Ibid., 1:132-134.

⁷⁷⁷ Farina, *The Italian Assault Troops*, 54.

⁷⁷⁸ Morisi, *Hell in the Trenches*, 299-300. See also Rochat, *The Arditi of the Great War*, 72.

(*Angriffsdivisionen*). This transformation implied the provision of training and equipment along the same lines of the *Sturmbataillone*. This step represented the completion of the *Stosstrupps* project, intended as a procedure to develop and spread new offensive TTPs to the German military institution, elevating its effectiveness. Furthermore, this initiative represented a critical factor underpinning the German tactical success of the 1918 *Kaiserschlacht* offensive.⁷⁷⁹

In the Italian Army, the establishment of the Assault Corps in June 1918 actualized the desire of the Supreme Command to capitalize on the successful tactical breakthroughs associated with the assault battalions. This project intended to bring the *Arditi* concept to the next organizational level, creating a specialized corps-level asset meant to serve as a force multiplier in support of the Italian operational plans. The Assault Corps, composed of two Assault Divisions, incorporated assault battalions, *Bersaglieri* battalions, cavalry, engineer, and artillery assets in a combined arms formation, capable not only of breaching the Austrian lines but also of executing autonomous exploitation in depth.⁷⁸⁰ As offered by Rochat, the example set by the German assault divisions likely constituted a factor of inspiration for the Italian Supreme Command to invest in this venture.⁷⁸¹ Furthermore, the activation of the Assault Corps

⁷⁷⁹ Gudmundsson, *Stormtroop Tactics*, 151-152. See also Lupfer, *The Dynamics of Doctrine*, 48-49.

⁷⁸⁰ Di Martino and Cappellano, *The Italian Assault Units in the Great War (1915-1918)*, 1:124, 130-131, 151-159, 178-181.

⁷⁸¹ Di Martino and Cappellano, *The Italian Assault Units in the Great War (1915-1918)*, 1:136-137. See also Rochat, *The Arditi of the Great War*, 98.

provided the last step of the “normalization” process of the assault battalions in the framework of the Italian Army, which started at the beginning of 1918.⁷⁸²

Every military organization brought the respective notion of assault units to a maturation along the lines initially drawn for it. The German Army was able, at least partially, to spread the *Stosstrupptaktik* inside its organization. The Italian Army transplanted the assault battalions’ concept into a corps-echelon formation, while simultaneously trying to promote interexchange with the conventional units and a more comprehensive combined arms approach.

The last point to address considering the organizational domain is the status that the German and Italian assault units in the military organization at large. In both cases, the respective high commands granted a privileged treatment to the members of the assault formations, including better food rations, exclusion from any type of additional duty, and a more liberal leave policy.⁷⁸³ The Italian Supreme Command went as far as also conceding a special hazardous duty pay to the *Arditi*.⁷⁸⁴ The allocation of organic motorized vehicles to the assault battalions and the bestowal of specific insignia to

⁷⁸² Di Martino and Cappellano, *The Italian Assault Units in the Great War (1915-1918)*, 1:154-155.

⁷⁸³ For the German Army, see Gudmundsson, *Stormtroop Tactics*, 80, 87. See also Bull, *Stosstrupptaktik*, chap. 5. For the Italian Army, see Di Martino and Cappellano, *The Italian Assault Units in the Great War (1915-1918)*, 1:66. See also Farina, 156; Pirocchi, *The Arditi*, 54.

⁷⁸⁴ Di Martino and Cappellano, *The Italian Assault Units in the Great War (1915-1918)*, 1:66.

distinguish the soldiers of the assault battalions from the rest of the army formations were further elements of the privileged status enjoyed by the shock troops.⁷⁸⁵

In the German Army, as well as the Italian one, the reasons behind this choice were similar. The granted privileges served the pragmatic purpose of maintaining the respective assault outfits focused on training and operations. Most of all, these benefits aimed at keeping the assault troops motivated, cohesive, and aggressive. After all, such military units represented a precious example to spur the ordinary soldiers out of the passive and defeated attitude derived from the harsh and monotone life in the trenches. Furthermore, they constituted a suitable subject for military propaganda.⁷⁸⁶

In sum, the comparison of the German *Stosstrupps* and the Italian *Arditi* in the organization domains reveals multiple similarities. The main points of divergence between the two outfits stem from the different approaches held by the respective military institutions in the creation and development of specialized assault units.

Weapons and Equipment

This section of the present chapter will present a comparison of the German and Italian assault units in the materiel domain. The analysis will start from the support

⁷⁸⁵ For the German Army, see Gudmundsson, *Stormtroop Tactics*, 80, 87, 90. See also Samuels, *Doctrine and Dogma*, 29; Bull, *Stosstrupptaktik*, chap. 5. Regarding the Italian Army, see Rochat, *The Arditi of the Great War*, 39-40. See also Pirocchi, *The Arditi*, 56.

⁷⁸⁶ For the German Army, see Gudmundsson, *Stormtroop Tactics*, 83. See also Bull, *Stosstrupptaktik*, chap. 5. Regarding the Italian Army, see Rochat, *The Arditi of the Great War*, 39-40, 61-62, 75.

weapons at the battalion level, shifting over to the individual weapons, and ending with some considerations on the equipment of the assaulters.

The *Sturmataillone* and the Italian assault battalions both employed a wide variety of support weapons, including machine guns (light and heavy), flamethrowers, mortars, and mountain cannons or howitzers. Nevertheless, there were some dissimilarities in the way each outfit combined these systems in support of the maneuver of the assault companies. In the German case, the *Sturmataillone* relied primarily on four types of *Truppwaffen* (squad weapons) to boost its firepower in combat. Those were the infantry gun or mountain howitzer, the light trench mortar, the machine gun, and the grenade launcher.⁷⁸⁷ The German storm troopers used to integrate those weapons in “mutually complementary” pairs matching the technical specifications and the degree of mobility of those systems to provide two different tiers of support for the advancing infantry.

More specifically, the field gun or mountain howitzer worked in tandem with the trench mortar to provide a direct-indirect fire combination from the line of departure. The same blend of direct-indirect fire capabilities appeared in an accompanying role with the machine gun and the grenade launchers that followed the assault team of the same *Sturmblock*.⁷⁸⁸ The *Sturmataillone* received the light machine gun at the end of 1916, with a likely distribution down to assault company level.⁷⁸⁹ It is interesting to notice that

⁷⁸⁷ Samuels, *Doctrine and Dogma*, 41.

⁷⁸⁸ Samuels, *Doctrine and Dogma*, 44-45.

⁷⁸⁹ Samuels, *Doctrine and Dogma*, 44. See also Samuels, *Command or Control?*, 91; Gudmundsson, *Stormtroop Tactics*, 98-100.

there was not a neat differentiation in the employment of the heavy and light machine guns in the German concept.

In the Italian *Arditi* battalions, the primary support weapons employed were the submachine gun, the heavy machine gun, and the mountain cannon (according to Bassi's model).⁷⁹⁰ In 1917, the trench mortar, reported in the official army tables of equipment but not in Bassi's concept,⁷⁹¹ was probably an alternative to the mountain cannon for the units that did not dispose of this kind of weapon. In 1918, most of the assault battalions ceded their organic mountain cannons, receiving a full complement of trench mortars.⁷⁹² The field artillery component remained as a combat support asset in the Assault Divisions.⁷⁹³

These three main weapon systems found a different location on the battlefield, with distinct roles. The submachine guns were organic to the *Arditi* platoon, and closely followed the advance of the assaulters. The heavy machine guns remained at the company echelon and followed the company HQ. Emplaced in offset positions, those weapons discriminately covered the attack platoons, focusing on the most immediate threats. Finally, the organic artillery element worked from the rear of these assault formations, directed by the battalion commander. This procedure derived from the limited degree of mobility displayed by this system that required time and the support of

⁷⁹⁰ Farina, *The Italian Assault Troops*, 76.

⁷⁹¹ Di Martino and Cappellano, *The Italian Assault Units in the Great War (1915-1918)*, 1:87.

⁷⁹² Farina, *The Italian Assault Troops*, 276.

⁷⁹³ Pirocchi, *The Arditi*, 93.

a train of pack animals for its relocation.⁷⁹⁴ In the Italian case, the assault units employed a more limited array of weapons and precisely delineated functions in the framework of the units' scheme of maneuver. The sources consulted for the *Arditi* do not mention the employment of grenade launchers and do not report a combined use of the trench mortar and the mountain artillery element.

The flamethrower was a system adopted by both formations to clear enemy trenches and bunkers in the wake of the advancing assaulters. This weapon proved very effective, also for the impact it had on enemy morale.⁷⁹⁵ However, it is possible to delineate differences in the type of systems used by the German and Italian assault battalions and in the concerns related to the employment of this weapon. The German Army disposed of two types of flamethrowers: heavy and portable.⁷⁹⁶ On the one hand, the heavy system had chiefly a stationary use. Emplaced in saps, just before the foremost enemy trenches, it integrated or replaced artillery in the destruction of the obstacles during the initial break-in phase.⁷⁹⁷ On the other hand, the German military doctrine considered portable flamethrowers as close combat weapons. For this reason, those were the only supporting weapons operating in close contact with the assault squad during an operation. The main concern in this kind of employment was to avoid exposing the

⁷⁹⁴ Farina, *The Italian Assault Troops*, 125-130.

⁷⁹⁵ For the German Army, see Samuels, *Doctrine and Dogma*, 47-48. See also Gudmundsson, *Stormtroop Tactics*, 44-45, 65; Bull, *Stosstrupptaktik*, chap. 3. Regarding the Italian Army, see Pirocchi, *The Arditi*, 92. See also Farina, *The Italian Assault Troops*, 83.

⁷⁹⁶ Gudmundsson, *Stormtroop Tactics*, 44.

⁷⁹⁷ Gudmundsson, *Stormtroop Tactics*, 44, 65.

flamethrower crew in the first assault echelons, given the vulnerability of the fuel tank on the back of the operator.⁷⁹⁸

The Italian Army had only portable flamethrowers.⁷⁹⁹ This weapon found extensive use in Major Bassi's first tactical experimentations at the school of Sdricca.⁸⁰⁰ Moreover, the adoption of flamethrowers in a close combat role yielded excellent results in battle, such as in the case of the raid on the Doss Alto (August 3, 1918) or the battle of Mount San Gabriele (September 4, 1917).⁸⁰¹ Nevertheless, the *Arditi* came to regard the flamethrower chiefly as a reserve weapon. The reason was that its weight and cumbersomeness prevented the flamethrower operators from keeping pace with the attack platoons, affecting the impetus of the tactical action.⁸⁰² In this respect, the rugged terrain typical of the Italian Front probably influenced the integration of this weapon in the overall scheme of an offensive operation.

Regarding the individual weapons, the German and Italian armies came to similar conclusions. Both assault outfits replaced rifle and bayonet, with dagger, pistols and carbines, more manageable and effective weapons in the context of trench warfare.

⁷⁹⁸ Ibid., 85.

⁷⁹⁹ Pirocchi, *The Arditi*, 92-93.

⁸⁰⁰ Di Martino and Cappellano, *The Italian Assault Units in the Great War (1915-1918)*, 1:72.

⁸⁰¹ Farina, *The Italian Assault Troops*, 113. See also Morisi, *Hell in the Trenches*, 278-279.

⁸⁰² Farina, *The Italian Assault Troops*, 83.

Moreover, the Italian and German TTPs revolved around the use of the hand grenade as an indispensable tool in close combat.⁸⁰³

However, it is possible to outline also some slightly different nuances in the employment of the basic assaulter kit illustrated above. On the one hand, in close combat, the German *Sturmtruppen* resorted to both offensive and defensive grenades, supplementing their use with dagger and pistols to finish the adversary. The German approach was very pragmatic, the choice of the weapon revolved around the situation and the best way to exercise the assault power.⁸⁰⁴

On the other hand, the *Arditi* preferred to employ chiefly offensive grenades, since those were safer for the assaulter due to the lesser fragmentation effect they produced if compared to the defensive grenades. Moreover, the *Arditi* perfected the use of phosphorous grenades to clear enclosed spaces, to create smoke screens, and to trick defenders into thinking they were under a gas attack.⁸⁰⁵ Finally, the *Arditi* considered the dagger as the primary weapon for close combat. Pistols were only carried by officers and machine gunners as back-up weapons. The fact that the assault squad of the attack platoon went into battle armed just with grenades and dagger remarks the importance of edged weapons in the combat style of the *Arditi*. Any other type of weapon was simply

⁸⁰³ For the German Army, see Samuels, *Doctrine and Dogma*, 46-49. See also Gudmundsson, *Stormtroop Tactics*, 51; Bull, *Stosstrupptaktik*, chap. 3, chap. 7. In regard to the Italian Army, see Farina, *The Italian Assault Troops*, 76-79. See also Pirocchi, *The Arditi*, 86-87.

⁸⁰⁴ Samuels, *Doctrine and Dogma*, 48-49.

⁸⁰⁵ Farina, *The Italian Assault Troops*, 79-80, 141. See also Pirocchi, *The Arditi*, 88-89.

viewed as a hindrance considering the speed and the agility that their leading role in the assault required.⁸⁰⁶

The last point of the current section compares the equipment of the *Stosstrupps* with that of the *Arditi*. At the individual level, the two units under examination elaborated similar solutions. By and large, the German and Italian assault units tailored their kits to the bare essential to meet the requisites for their style of combat; first, the necessity for speed and agility.⁸⁰⁷ Among other things, both units reverted to a more functional and comfortable uniform than the standard-issue of the respective army. These garments were designed to facilitate the technical movements implied in the job of the assaulter.⁸⁰⁸ Moreover, both units made use of some sort of load-bearing system allowing the carriage of an adequate amount of ammunition and grenades, without bringing along the rucksack, considered an element of hindrance in the assault.⁸⁰⁹

At the unit level, it is worth mentioning that both the *Stosstrupps* and the *Arditi* employed organic motorized vehicles to move their troops to and from the assigned

⁸⁰⁶ Farina, *The Italian Assault Troops*, 78-79, 106.

⁸⁰⁷ For the German Army, see Gudmundsson, *Stormtroop Tactics*, 51. For the Italian Army, see Farina, *The Italian Assault Troops*, 84-86. See also Pirocchi, *The Arditi*, 73, 79.

⁸⁰⁸ For the German Army, see Gudmundsson, *Stormtroop Tactics*, 51. See also Cardona, *Sturmtruppen*, 175-176. For the Italian Army, see Farina, *The Italian Assault Troops*, 84-86. See also Pirocchi, *The Arditi*, 73-76.

⁸⁰⁹ For the German Army, see U.S. War Department, *Tactical Studies No. 1*, 19. See also Gudmundsson, *Stormtroop Tactics*, 51; Cardona, *Sturmtruppen*, 171. For the Italian Army, see Farina, *The Italian Assault Troops*, 86. See also Pirocchi, *The Arditi*, 79-81.

operational boxes on the front line.⁸¹⁰ This is a remarkable fact, considering the scarcity of this type of asset in the respective armies during the Great War. Usually, trucks and similar kinds of vehicles were managed at the division, if not at the corps level. The searchlight represents a difference at the unit level. Whereas the *Arditi* made ample and effective use of this kind of system in battle and training,⁸¹¹ the sources consulted regarding the *Sturmtrupps* did not specify the adoption of such a device on the German side.

In sum, the German and Italian assault units employed a similar combination of weapons at the unit and the individual level. The most significant difference between the two examined outfits rests in the array of support weapons included in the tables of equipment and in the methodology adopted to integrate the effects of those systems.

Selection, Training, and Esprit de Corps

This section will compare the selection process and the training system of the *Arditi* and the *Stosstrupps*. The closing part will provide insight regarding the specific unit cultures developed by the considered units.

The *Sturmbataillone* and the Italian assault battalions presented an undeniable similarity in the way they drafted new personnel into their ranks, in spite of the former being provisional formations and the latter permanent ones. First, they recruited chiefly

⁸¹⁰ For the German Army, see Gudmundsson, *Stormtroop Tactics*, 80. For the Italian Army, see Farina, *The Italian Assault Troops*, 94.

⁸¹¹ Farina, *The Italian Assault Troops*, 229-233.

from other units, not necessarily infantry ones.⁸¹² For this reason, both had to cope with the reluctance of other commands to cede high-quality personnel or to get rid of under-performers by sending them to the assault outfits.⁸¹³ Second, given the particular nature of their institutional mission, the German and Italian special units established a set of similarly stringent prerequisites for their recruits, including being unmarried, an age limit, and above-the-average physical skills.⁸¹⁴ Finally, in both cases, there was an accurate screening of the trainees before or during the initial qualification pipeline.⁸¹⁵

The main point of divergence between the *Stosstrupps* and the *Arditi* is related to the willingness of soldiers to apply for this specialization. In the German case, both Gudmundsson and Samuels specify that a voluntary application was an essential requirement, although the latter admits that there were some sporadic exceptions to this policy.⁸¹⁶ On the Italian side, instead, even though the willingness of the recruit was

⁸¹² For the German Army, see Samuels, *Doctrine and Dogma*, 29. See also Balck, *Development of Tactics—World War*, 86; Gudmundsson, *Stormtroop Tactics* 79. For the Italian Army, see Di Martino and Cappellano, *The Italian Assault Units in the Great War (1915-1918)*, 1:69-71, 82-85, 96. See also Pirocchi, *The Arditi*, 56-57.

⁸¹³ For the German Army, see Gudmundsson, *Stormtroop Tactics*, 79. See also Samuels, *Doctrine and Dogma*, 29. For the Italian Army, see Di Martino and Cappellano, *The Italian Assault Units in the Great War (1915-1918)*, 1:82-85.

⁸¹⁴ For the German Army, see Samuels, *Doctrine and Dogma*, 29. For the Italian Army, see Pirocchi, *The Arditi*, 56-57. See also Di Martino and Cappellano, *The Italian Assault Units in the Great War (1915-1918)*, 1:82, 85, 91.

⁸¹⁵ For the German Army, see Gudmundsson, *Stormtroop Tactics*, 79. For the Italian Army, see Farina, *The Italian Assault Troops*, 150, 168. See also Rochat, *The Arditi of the Great War*, 42; Pirocchi, *The Arditi*, 57-58; Di Martino and Cappellano, *The Italian Assault Units in the Great War (1915-1918)*, 1:427.

⁸¹⁶ Gudmundsson, *Stormtroop Tactics*, 79. See also Samuels, *Doctrine and Dogma*, 29.

aspirational, it did not remain exclusive. The motivation was that the applicants available did not always suffice to the needs of the battalions in the order of battle.⁸¹⁷

This difference makes more sense considering the actual number of official assault outfits in each organization. On the one hand, in 1917, at the peak of the *Stosstrupps'* expansion, the German Army included 18 *Sturmbataillone*.⁸¹⁸ On the other hand, the Italian Army arrived to field 39 *reparti d'assalto* (including the assault training and replacement battalions).⁸¹⁹ Even taking into account the larger size of the German units with respect to their counterparts, the Italian Army still maintained a significantly higher number of these assets. Thus, the difficulty of manning the Italian formations only with volunteers is comprehensible.

The second point of the comparative analysis of this section considers the training systems adopted by the *Arditi* and the *Sturmtrupps*. In this respect, both units worked on a similar concept, revolving around continuity, intensity, and realism. In the Italian as well as in the German case, the training occupied most of the shock troopers' routine, with the only interruption provided by operational activities. Moreover, the training *curriculum* incorporated functional physical training and sports, individual technical preparations, and collective field exercises, integrating live-fire artillery assets. The use of live ammunition was a common practice on both sides, as well as the availability of

⁸¹⁷ Farina, *The Italian Assault Troops*, 148-149. See also Rochat, *The Arditi of the Great War*, 41-42.

⁸¹⁸ Samuels, *Doctrine and Dogma*, 25.

⁸¹⁹ Rochat, *The Arditi of the Great War*, 65.

dedicated training facilities, with realistic mock-ups of enemy trenches and fortifications.⁸²⁰

In terms of differences, there are only two main points to consider: the provision of a specialized preparation in mountain warfare and the significance of the introduced training *curriculum* in the respective military organizations at large. Concerning the first, the *Arditi* “Green Flames” developed and implemented an *ad hoc* program to cope with the necessities of combat in the Italian Alps. Without a doubt, the *Alpini* tradition played a significant role in this sense. However, this method was truly unique because it combined the innovative breakthroughs of Bassi’s precepts with the mobility skills of the *Alpini* units.⁸²¹

The primary sources available do not highlight a similar practice in the German *Sturmabteilung*. However, the German order of battle included conventional units specialized in mountain warfare, Rommel’s *Württemberg* Mountain Battalion being the most famous example. In this regard, Gudmundsson accurately describes the extensive mountaineering training made by the units of the Austro-German Fourteenth Army, before the Caporetto offensive of 1917. The assault battalions and the mountain infantry assets tasked with this operation mutually exchanged training and tactical insights, coalescing *Stosstrupptaktik* with mountain warfare. Military history testifies that this

⁸²⁰ For the German Army, see Gudmundsson, *Stormtroop Tactics*, 87, 113. See also Morisi, *Hell in the Trenches*, 16; Samuels, *Command or Control?*, 239-240; Lupfer, *The Dynamics of Doctrine*, 28. For the Italian Army, see Farina, *The Italian Assault Troops*, 166-177. See also Di Martino and Cappellano, *The Italian Assault Units in the Great War (1915-1918)*, 1:347-349; Pirocchi, *The Arditi*, 61-69.

⁸²¹ Morisi, *Green Flames*, 13.

osmosis had great success.⁸²² Overall, this point offers once again the opportunity to appreciate how the different physical environments of the respective theater of operations engendered diverse requirements for the training *curricula* of the assault outfits.

The last point of divergence between the *Arditi* and *Sturmtrupps* training method entails the consideration of its significance in the framework of the respective parent organizations. On the German side, the concept devised by Rohr was but a logical evolution of the excellent training system present in the German Army.⁸²³ In the Italian Army, instead, Bassi's training method came as a truly innovative practice. In fact, in 1917, the effectiveness of the institutional training program was poor, as well as the attention dedicated to this activity by the senior Army leadership.⁸²⁴ For the above-mentioned reasons, the *Arditi* indirectly provided a much-needed training model for the ordinary Italian formations without necessarily retaining an instructional role.⁸²⁵ In contrast, the courses held by *Sturmabteilungen* engendered a further refinement of an already sound training system.⁸²⁶

⁸²² Gudmundsson, *Stormtroop Tactics*, 129-131, 141.

⁸²³ Samuels and Bull accurately describe the great deal of consideration given by the German Army to training and explain the effectiveness of the German system. Samuels, *Doctrine and Dogma*, 98-99. See also Bull, *Stosstrupptaktik*, chap. 1.

⁸²⁴ Di Martino and Cappellano, *The Italian Assault Units in the Great War (1915-1918)*, 1:331, 352, 367. See also Farina, *The Italian Assault Troops*, 159-160.

⁸²⁵ Di Martino and Cappellano, *The Italian Assault Units in the Great War (1915-1918)*, 1:360-361.

⁸²⁶ Lupfer, *The Dynamics of Doctrine*, 28.

The last stage of the analysis provided in this section is the comparison of the peculiar unit cultures developed by the *Stosstrupps* and the *Arditi*. By and large, the elitist characteristics of both outfits and the dangerous nature of their tactical tasks contributed to the creation of a strong esprit de corps that prized initiative, aggressiveness, and self-discipline.⁸²⁷ As already offered, the respective parent institutions conveniently encouraged this phenomenon, considering the desire of a clear example of martial prowess to inspire the masses of soldiers alienated by the oppressing reality of the trenches.

The only point of divergence on this subject is related to the effect that this culture exercised on the relationship between the assault battalions and their parent organizations at large. More specifically, in the Italian case, the consulted sources suggest some sort of disciplinary shortcomings attributed to the *Arditi* by the rest of the army. In this regard, the staunch attachment to their professionalism displayed by the members of the Italian assault units, together with the belief of being somewhat superior to the other servicemen, created some “undesirable” consequences in certain situations, always off duty. Apart from the picturesque manifestations of joy displayed by the *Arditi* every time they received a combat assignment, this chiefly translated with quarrels with the Italian military police, the *Carabinieri*.⁸²⁸

⁸²⁷ For the German Army, see Gudmundsson, *Stormtroop Tactics*, 81-82. For the Italian Army, see Farina, *The Italian Assault Troops*, 74, 151-152, 157-158, 164-166, 175. See also Di Martino and Cappellano, *The Italian Assault Units in the Great War (1915-1918)*, 1:427-428; Rochat, *The Arditi of the Great War*, 38-40.

⁸²⁸ Rochat, *The Arditi of the Great War*, 38-40.

However, as posited by Di Martino and Cappellano, the primary sources available demonstrate the sporadic nature of these episodes. Additionally, the same sources highlight the dogged disciplinary efforts performed by the *Arditi* officers to maintain the situation under control.⁸²⁹ Nonetheless, these instances provided the right opportunities for certain reactionary fringes within the Italian Army to spread a sort of “black legend” about the assault battalions. This bad reputation, in turn, generated adverse effects at the institutional level until the end of the conflict.⁸³⁰ In regard to the German *Sturmtruppen*, the sources consulted did not suggest any major issues related to their relationship with the German military organization at large. Nonetheless, it is likely that the special privileges of the *Stosstruppen* and their different standards of discipline engendered some sort of jealousy within the conventional army formations.

In sum, the analysis conducted in the present section displays a remarkable similitude between the *Arditi* and the *Stosstruppen* concerning selection standards, training, and unit culture. As in the previous sections, the major differences from the comparison derive from the diverse nature of the examined outfits, together with conditions attributable to specific characteristics of the respective military institutions and theaters of operations.

⁸²⁹ Di Martino and Cappellano, *The Italian Assault Units in the Great War (1915-1918)*, 1:192-193, 427-428.

⁸³⁰ Di Martino and Cappellano, *The Italian Assault Units in the Great War (1915-1918)*, 1:427-428. See also Pirocchi, *The Arditi*, 99-103.

Tactics

The last section of Chapter Five examines analogies and dissimilarities of the battle tactics adopted by the German and the Italian assault battalions. By and large, the considered outfits implemented a similar system of TTPs. This fact is understandable because the Italian took as a source of inspiration the Austrian *Sturmtrupps* model, a derivative of the German one. The two systems displayed different nuances ascribable to the contrasting institutional roles of the assault units and specific conditions of the theater of operations.

The proposed review will proceed with a top-down approach, starting with the assigned mission sets and ending with the consideration of specific battle tactics. As the first point, the combat role of the *Arditi* and the *Sturmbataillone* implied a marked focus on offensive actions, primarily attacks with limited objectives and raids.⁸³¹ This is undoubtedly a common point.

However, the comparison reveals interesting differences between the examined units. First, in relation to attacks (not raids), the *Stosstrupps* had the responsibility to lead and supplement the ordinary infantry formations.⁸³² Therefore, the German assault tactics implied an inherent integration with the line infantry. On the contrary, the *Arditi* chiefly

⁸³¹ For the German Army, see Gudmundsson, *Stormtroop Tactics*, 84. See also Balck, *Development of Tactics–World War*, 85-88; Samuels, *Command or Control?*, 242. For the Italian Army, see Farina, *The Italian Assault Troops*, 141-142, 144. See also Di Martino and Cappellano, *The Italian Assault Units in the Great War (1915-1918)*, 1:67, 72-73; Rochat, *The Arditi of the Great War*, 50.

⁸³² Gudmundsson, *Stormtroop Tactics*, 84. See also Balck, *Development of Tactics–World War*, 85; Samuels, *Command or Control?*, 242; U.S. War Department, *Tactical Studies No. 1*, 18.

worked alone to breach the front line and seize key positions inside the enemy defensive sector, only to be relieved later by follow-on conventional contingents.⁸³³ As a result, the Italian assault battalions were rather an autonomous component destined to replace other infantry units in the first stage of an offensive operation.

Second, from their onset, the *Sturmtruppen* found critical employment also in the execution of counterstrokes and deliberate counter-attacks.⁸³⁴ On the contrary, the *Arditi*'s involvement in counteroffensive operations started with the retrograde of Caporetto, well after their activation. In these circumstances, the Italian assault battalions carried out delay activities for which they were not trained or equipped. In 1918, their role in the defense became more and more consolidated on counter-attacks. Finally, the doctrinal document for the employment of the Assault Corps in June 1918 clearly defined their offensive function in defensive operations.⁸³⁵

Considering the operational process of the German and Italian assault troops, it is possible to highlight a complete correspondence. Both the *Arditi*'s and the *Sturmtruppen*' operating procedures envisaged thorough planning underpinned by a robust organic and

⁸³³ Rochat, *The Arditi of the Great War*, 31-32. See also Morisi, *Hell in the Trenches*, 304.

⁸³⁴ Balck, *Development of Tactics—World War*, 87-88. See also Lupfer, *The Dynamics of Doctrine*, 16-20, 27-28.

⁸³⁵ Di Martino and Cappellano, *The Italian Assault Units in the Great War (1915-1918)*, 1:97-102, 118, 160. See also Rochat, *The Arditi of the Great War*, 59-60; Morisi, *Hell in the Trenches*, 209, 307.

non-organic information collection and an accurate preparation, including realistic rehearsals and coordination with the line units before the execution of every operation.⁸³⁶

Another critical point in common was the integration of non-organic indirect-fire artillery support in operations. This was essential to attain surprise at the beginning of the attack, disrupt the enemy defense system, and maintain the necessary level of impetus throughout execution. Although the Italian artillery never reached the same levels of effectiveness displayed by the Germans, especially in relation to the technique of the creeping barrage, both units found the most suitable ways and means to coordinate the allocated fire support in their operations.⁸³⁷

The last point proposed in this section focuses on the TTPs employed by the *Arditi* and *Sturmtruppen* in the execution of raids and attacks. First, in both cases, the offensive procedures relied on surprise, speed, and shock to quickly penetrate the enemy defenses and overwhelm the opponents.⁸³⁸ A second similarity is the adoption of infiltration tactics by the *Sturmtruppen* and the *Arditi*. The offensive efforts, based on assault squads, focused on pre-identified weak spots to penetrate the foremost line of obstacles and trenches. Following the break-in, the assault units converged on

⁸³⁶ For the German Army, see Samuels, *Command or Control?*, 242. See also Samuels, *Doctrine and Dogma*, 62; Morisi, *Hell in the Trenches*, 57; Gudmundsson, *Stormtroop Tactics*, 50. For the Italian Army, see Farina, *The Italian Assault Troops*, 138-139, 141-146. See also Pirocchi, *The Arditi*, 110-111.

⁸³⁷ For the German Army, see Lupfer, *The Dynamics of Doctrine*, 44-45. For the Italian Army, see Farina, *The Italian Assault Troops*, 128-129, 146. See also Morisi, *Hell in the Trenches*, 203.

⁸³⁸ For the German Army, see Lupfer, *The Dynamics of Doctrine*, 44. For the Italian Army, see Farina, *The Italian Assault Troops*, 130-146. See also Pirocchi, *The Arditi*, 110.

strongpoints and weapons emplacements in the depth of the defensive sector, methodically tearing apart the adversarial defensive system. To achieve this disruptive effect, both outfits resorted to flanking and envelopment maneuvers combining the assault power of the infantry squads with the synchronized application of firepower by organic support weapons.⁸³⁹ After the seizure of the assigned objective, both the *Stosstrupps* and the *Arditi* usually consolidated in a hasty defensive perimeter with the integration of their organic support weapons and the external indirect-fire artillery.⁸⁴⁰ The action ended with a relief in place by follow-on formations or with a withdrawal in the specific case of trench raids.

Notwithstanding the similarities described above, the TTPs adopted by the German and Italian assault troops displayed two major differences concerning attack formations and trench-clearing techniques. In the first case, the *Sturmtrupps* adopted a wave system, fusing assault detachments with conventional infantry units.⁸⁴¹ This was in line with their institutional task in combat, which was to reinforce and lead the other army units. Quite differently, the Italian assault battalions worked in isolation, structuring their formations on assault companies and platoons that in turn, relied on the synchronized and integrated interaction of *Arditi* squads of different specialization. The

⁸³⁹ For the German Army, see Samuels, *Doctrine and Dogma*, 52-53. See also Gudmundsson, *Stormtroop Tactics*, 150-151. For the Italian Army, see Farina, *The Italian Assault Troops*, 130-134.

⁸⁴⁰ For the German Army, see Balck, *Development of Tactics—World War*, 174-175. For the Italian Army, see Farina, *The Italian Assault Troops*, 106-115.

⁸⁴¹ Lupfer, *The Dynamics of Doctrine*, 43-44. See also Samuels, *Doctrine and Dogma*, 51-52. See also U.S. Army War College, *German and Austrian Tactical Studies*, 110.

ordinary infantry formations trailed behind, separated by the main assault force.⁸⁴² Also in this case, the system adopted by the Italian assault units reflected their basic mission set, which was to autonomously spearhead the offensive of the other army formations.

Without a doubt, the German system implied an inherent integration of the *Stosstrupps* with the infantry. This promoted a mutual collaboration that became critical in mopping up enemy centers of resistance during an assault progression and in guaranteeing a smoother relief in place on the objective. Furthermore, the German method allowed a more balanced employment of resources in support of large-scale attacks because it favored the spread of the assault squad on a wider frontage.

On the contrary, the Italian system entailed a more focused application of the assault battalions' specialized capabilities and facilitated a swifter execution of the initial phase of the attack, from the break-in to the seizure of the assigned objectives. A suitable example is the counter-attack against the Austrian positions on the Col Moschin during the Battle of Solstice. In these circumstances, the *Arditi* were able to overwhelm the enemy defenses in only 10 minutes.⁸⁴³ However, this method called for the employment of a larger quantity of specialized resources, since the assault battalions had to conduct all the critical tasks related to an offensive operation by themselves. Moreover, this system left the assault battalions without prompt support to tip the scales of the situation when their progression on the objective suffered a slow-down. Finally, most of the time, the Italian procedure implied the creation of a gap between the *Arditi* assault forces and the

⁸⁴² Farina, *The Italian Assault Troops*, 104-115. See also Morisi, *Hell in the Trenches*, 209; Pirocchi, *The Arditi*, 109-110.

⁸⁴³ Farina, *The Italian Assault Troops*, 310.

trailing infantry units. This hiatus represented a critical vulnerability in the hasty defense of the seized objectives, leaving lightly-armed assault outfits to face the brunt of the enemy counter-attacks that usually followed.⁸⁴⁴

The second major difference between the tactics of the German and the Italian shock troops concerned the clearing of enemy trenches. On the one hand, the *Sturmtruppen* implemented and perfected the *Aufrollen* technique, favoring a fight inside the network of trenches after the initial break-in.⁸⁴⁵ On the other hand, The *Arditi* preferred to occupy elevated and defiladed positions on the rim of the trenches, spreading their “buddy teams” across the sector assigned to an attack platoon. This allowed the soldiers to clear the trenches more efficiently, and control the accesses of the enemy dugouts, bottling up the defenders before they could react and man the fortifications.⁸⁴⁶ The different trench-clearing techniques likely derived from the diverse terrain characteristics of the Western and Italian fronts. While the former was chiefly characterized by flat or rolling terrain covered by an intricate network of trenches and fortifications, the latter included a generous share of jagged mountainous ground, where the belligerents organized their defenses by excavating tunnels and chambers in the rock.

⁸⁴⁴ Rochat, *The Arditi of the Great War*, 50-51.

⁸⁴⁵ Samuels, *Doctrine and Dogma*, 18. See also Erwin Rommel, *Infantry Attacks*, trans. Gustave E. Kiddé (Washington, DC: The Infantry Journal, 1944), 72; U.S. Army War College, *German and Austrian Tactical Studies*, 109.

⁸⁴⁶ Farina, *The Italian Assault Troops*, 104-108, 112. The *Arditi* were privy with the *Aufrollen* technique, although, most of time, they preferred to employ the clearing technique of their own devising. Di Martino and Cappellano, *The Italian Assault Units in the Great War (1915-1918)*, 1:379.

In sum, the arrays of tactics employed by the *Arditi* and the *Sturmtrupps* during the Great War display a great number of uncanny similarities. Nonetheless, each assault unit also featured peculiar TTPs attributable to their diverse institutional role, together with the necessity to cope with different requirements dictated by the operational environment of the respective theaters of operation.

Conclusion

The comparative analysis conducted in this chapter demonstrates that the *Sturmtrupps* and the *Arditi* were indeed very similar. Without a doubt, the German Army arrived at the formulation of an effective operating concept related to the assault units almost two years in advance of the Italian armed forces. The concept of *Sturmabteilung* made a huge leap forward with the advent of Captain Rohr in August 1915 and showed its worth to the German Army during the battles of *Schrantzmannle* and *Hartmannsweilerkopf* at the end of 1915.⁸⁴⁷

Quite differently, the Italian assault battalions were first authorized in June 1917, proving their mettle in the Eleventh Battle of the Isonzo in August 1917 and the battle of Mount San Gabriele in September 1917.⁸⁴⁸ Nonetheless, Italy entered the war only in May 1915. Therefore, it is undeniable that the Italian Army bumped into the unforgiving reality of the trenches later, and then developed the requirements for innovation.

⁸⁴⁷ Gudmundsson, *Stormtroop Tactics*, 49-50, 51-53. Samuels, *Doctrine and Dogma*, 19. See also Bull, *Stosstrupptaktik*, chap. 3, chap. 5.

⁸⁴⁸ Rochat, *The Arditi of the Great War*, 47-51. See also Di Martino and Cappellano, *The Italian Assault Units in the Great War (1915-1918)*, 1:65, 81-82.

If the *Stosstrupps* concept is a “pure” product of the German military tradition, the fact that the Italian Army found “both a model and a stimulus”⁸⁴⁹ in the *Stosstrupptaktik* is a factor to consider when thinking about the *Arditi* battalions. Nevertheless, the Italian assault troops further grew in a very original way, developing specific points of distinction from the German model.

The essential difference between the *Arditi* and the *Sturmtrupps* lies in the function that the respective military institutions assigned to them. Both were part of a larger tactical solution to the problem posed by trench warfare. However, the German units had the primary task of spreading their innovative TTPs throughout the army, while supplementing the conventional formations in combat, as the tactical upgrade progressed towards its completion. Quite differently, the Italian assault battalions rose and developed to provide a specific operational capability in battle. Consequently, this primary difference, together with factors associated with the specific traits of the respective military institutions and theaters of operation, gave birth to the minor diverging nuances between the two assault units highlighted in the comparative analysis of the present chapter.

In light of their peculiar responsibilities, the *Arditi* and *Sturmtrupps* affected the respective military organizations in dissimilar ways in the aftermath of the Great War. On the German side, the *Sturmtrupps* legacy went on as a vital part of the tactical doctrine. It became the baseline, upon which more modern infantry tactics sprouted in the interwar

⁸⁴⁹ Gooch, *The Italian Army and the First World War*, 201.

period.⁸⁵⁰ During the Great War, *Stosstrupptaktik* did not yield effects over the tactical level, because the German Army lacked the necessary means, especially mobility-wise, to transform the tactical victories in operational successes. However, this set of tactics indelibly shaped the way the German officers regarded the offensive problem, capitalizing on the critical principles of speed, surprise, and disruption in depth of the enemy formations. At the beginning of the Second World War, the combination of these fundamentals with the employment of “fully motorized and partially armored Panzer divisions,” generated the concept of *Blitzkrieg*.⁸⁵¹

In the Italian Army, instead, the evolution of the *Arditi*'s tactics in the original organization construct of the Assault Corps, brought forth, at least partially, successful outcomes at the operational level in the final Battle of Vittorio Veneto. Although it would not be correct to maintain that the tactical precepts of the assault battalions determined the fate of the last Italian offensive, the assault units provided a positive contribution to it.⁸⁵² However, after the conflict, the legacy of the *Arditi* got lost in the overwhelming dynamics of politics, military reorganization, and partisan conflicts. Caught in the crossfire of demobilization, the *Arditi* did not find a place, as a “pure” combat outfit, in an organization that was reorienting itself to peacetime conditions. The Italian Army did not show the necessary degree of far-sightedness to appreciate and retain the successful

⁸⁵⁰ Samuels, *Doctrine and Dogma*, 31.

⁸⁵¹ Gudmundsson, *Stormtroop Tactics*, xii-xiii, 178. See also Bull, *Stosstrupptaktik*, “Conclusion.”

⁸⁵² Di Martino and Cappellano, *The Italian Assault Units in the Great War (1915-1918)*, 1:140-147, 219-220. See also Rochat, *The Arditi of the Great War*, 105, 108-109; Morisi, *Hell in the Trenches*, 292-293, 307.

tactical breakthroughs brought over by the experience of the assault battalions. Yet, the elitist nature of the *Arditi*, together with the concerns related to their disciplinary attitude and political involvement, did not facilitate such a process of integration. The tragic result of the combination of these circumstances is that Italian infantry quickly devolved back to pre-war standards in regard to tactics, training, and organization.⁸⁵³

⁸⁵³ Rochat, *The Arditi of the Great War*, 131. See also Di Martino and Cappellano, *The Italian Assault Units in the Great War (1915-1918)*, 1:258.

CHAPTER 6

CONCLUSION

This chapter will take stock of the work presented in this thesis, illustrating the significance of the German *Stosstrupps* and the Italian *Arditi*, presenting practical lessons for the modern military professional, and outlining further opportunities for research on this topic.

The Great War represents an important chapter in the history of modern warfare. The necessity to break the deadlock of the trenches triggered a process of innovation in tactics, organization, training, leadership, and materiel among all the belligerents that lasted until the end of the war. The results of this transformation set the premises for the interwar military debate, accompanying the military organizations toward the Second World War, undoubtedly another milestone in the development of the western way of warfare.⁸⁵⁴

Despite its defeat in World War I, the German military organization offered some brilliant examples of effective tactical and doctrinal innovation. The notion of elastic defense in depth and the formulation of modern infantry assault tactics constitute the pillars of the German process of adaptation to the new requirements of trench warfare.⁸⁵⁵ Further remarkable breakthroughs, which followed the aforementioned concepts, are the

⁸⁵⁴ Murray and Knox, "Thinking about revolutions in warfare," 6, 10-11. See also Howard, "Men against Fire," 526.

⁸⁵⁵ Lupfer, *The Dynamics of Doctrine*, vii.

decentralized approach to command and control and the first embryonic forms of combined arms doctrine.⁸⁵⁶

The German *Sturmabteilung* had an essential role in this process of change.⁸⁵⁷ They represented a breeding ground for new ideas and a vessel to gather and implement the feedback of the process of “horizontal innovation,” described by the historian Robert Foley.⁸⁵⁸ Furthermore, by virtue of their instructional role, the *Stosstruppen* proved invaluable in the dissemination of the new set of tactics throughout the German military institution.⁸⁵⁹ For the above-mentioned reasons, the German Army in general, and the *Sturmtruppen* in particular, have been the focal point of a wide variety of military studies in the last decades. All these literary works analyzed the German doctrinal innovation in depth, recognizing the value of its precepts in the evolution of military tactics of the 20th century, especially concerning the infantry branch.

During the Great War, the Italian Army walked its own path of transformation and adaptation, culminating with the post-Caporetto reorganization promoted by General Armando Diaz, which set the premises for the final offensive of Vittorio Veneto.⁸⁶⁰ This

⁸⁵⁶ Lupfer, *The Dynamics of Doctrine*, 19, 42-43. See also House, *Toward Combined Arms Warfare*, 34-37; Gudmundsson, *Stormtroop Tactics*, 172-174.

⁸⁵⁷ Lupfer, *The Dynamics of Doctrine*, 27-29, 43. See also House, *Toward Combined Arms Warfare*, 34.

⁸⁵⁸ Foley, “A Case Study in Horizontal Military Innovation,” 799-827. See also Gudmundsson, *Stormtroop Tactics*, 47.

⁸⁵⁹ Samuels, *Doctrine and Dogma*, 30-31. See also Lupfer, *The Dynamics of Doctrine*, 43-44; Gudmundsson, *Stormtroop Tactics*, 50-51.

⁸⁶⁰ Morisi, *Hell in the Trenches*, chap. 3, 307, Kindle. See also Rochat, *The Arditi of the Great War*, 61-62, 71-72.

process followed similar requirements to those underpinning the German evolution, first, the necessity to break the *impasse* of trench warfare. However, the Italian Army worked under the logic of a different military tradition, also facing dissimilar situational inputs attributable to the peculiar nature of its theater of operations. In this respect, the *Arditi* represented one of the main innovative features developed by the Italian military organization during World War I.⁸⁶¹

Different from Germany, Italy ultimately prevailed over its opponent. The armistice between the Italian and the Austro-Hungarian governments signed on November 4, 1918, ahead of the end of the hostilities on the Western Front (on November 11), contributed to a faster German surrender. In fact, with Austria out of the equation, the troops of the *Entente* were free to attack Germany through Hapsburg territories.⁸⁶² Nevertheless, in certain fringes of the military and the political world, the Italian Army became more famous for the tragic facts of Caporetto,⁸⁶³ while significant breakthroughs, such as the one related to the *Arditi*, went unnoticed in the scope of international military history. The limited number of studies in the English language dedicated to this topic represents a clear example of this idea. The purpose of this thesis is to highlight the military significance of the Italian assault units as an instrument and a model that supported the Italian Army in overcoming the challenges of the Great War.

⁸⁶¹ Rochat, *The Arditi of the Great War*, 11; Pirocchi, *The Arditi*, 9; Morisi, *Hell in the Trenches*, v, 299; Di Martino and Cappellano, *The Italian Assault Units in the Great War (1915-1918)*, 1:118; Dechigi, "Presentation," 5.

⁸⁶² Thompson, *The White War*, chap. 26, Kindle.

⁸⁶³ *Ibid.*, chap. 25.

Furthermore, this dissertation intends to introduce this subject to the US military professional.

The results brought forth by the comparative analysis offered in the fifth chapter strongly suggest that the *Arditi* presented many similarities with the *Stosstrupps*. The Italian assault units emerged from the singular convergence between the Italian infantry tradition and the Austrian *Sturmtrupps* model, evolving in a concept without equal in the other military institutions of the *Entente*.⁸⁶⁴ Although the *Arditi* never attained the instructional role typical of the German assault formations, they introduced some particular innovations of their own. The use of the “buddy system,” the combined arms specialization inside the assault company framework, and the method adopted to integrate their replacements constitute clear examples of these breakthroughs.

Furthermore, the notion of Assault Corps, albeit limited in scope, provides an alternative model of assault formation above the battalion echelon to the far more famous concept of *Angriffsdivisionen* credited to the German Army.⁸⁶⁵ An original characteristic of the Assault Corps was the inclusion of high-mobility formations (cavalry outfits on armored cars, *Bersaglieri* cyclist units) in this new organizational entity. This structure combined assault and breaching skills with mobility capabilities necessary to achieve

⁸⁶⁴ Di Martino and Cappellano, *The Italian Assault Units in the Great War (1915-1918)*, 1:257.

⁸⁶⁵ Rochat, *The Arditi of the Great War*, 100-103. See also Di Martino and Cappellano, *The Italian Assault Units in the Great War (1915-1918)*, 1:151, 159-161, 178-197.

exploitation in depth and consolidation of gains.⁸⁶⁶ Moreover, this also represents a further step towards the modern idea of combined arms formations.⁸⁶⁷

The point to be made here is not that the Italian *Arditi* were better, or more effective, than their German counterpart. Quite differently, this work aims at highlighting the historical significance of the Italian assault units, considering their contribution to the evolution of modern infantry tactics.

This thesis is significant for both US military professionals and for the Italian military community. In the first case, this dissertation provides a useful reference in the English language to gain a grasp on the topic of Italian tactical innovation and assault units. This paper described the development of the *Arditi*, illustrating its origins, organization, training, military culture, and tactics. In addition, the comparison with the *Sturmtruppen*, a model already consolidated in the international military literature, allows the reader to better gauge the strengths and weaknesses of the Italian concept. Most of all, the results of this work should prove that the Italian Army was still able to engender and put to good use assault formations, despite the shortcomings it displayed at the onset of the Great War. These outfits rivaled the famous *Sturmbataillone* and did not find similar development in the other members of the *Entente*.

With specific reference to the Italian military community, this thesis intends to provide three main insights regarding the *Arditi*. First, the Italian assault units represented a short yet critical chapter of the long Italian military tradition. The post-war association

⁸⁶⁶ Di Martino and Cappellano, *The Italian Assault Units in the Great War (1915-1918)*, 1:193-197.

⁸⁶⁷ Morisi, *Hell in the Trenches*, 301.

of the *Arditi* with Fascism cast a long shade on the real value, at least on the military level, of this combat outfit.⁸⁶⁸ Nevertheless, the accomplishments of the Italian assault battalions at the tactical level and their innovative doctrinal solutions deserve to be studied by the young infantry officers. This is even more critical because, after the Great War, the *Arditi*'s slate was wiped clean due to the influence of a wide variety of organizational and political factors.

Second, the juxtaposition of the German and the Italian models provide an interesting insight into the long-standing organizational controversy attributing to special operations outfits a negative influence on the overall military institution. The main point of this debate is that the drafting of highly skilled individuals in the ranks of special outfits drains the conventional formations of quality human resources. In this regard, if this outcome is probably inevitable, the German solution of dedicating his "special operations units *ante litteram*" to an instructional role provides useful mitigation to this issue. After all, notwithstanding the special operations' contribution to the Joint Force, the exploitation of special forces units as a "forge" of new tactical concepts and a vessel for their diffusion could be a way to further capitalize on the Army's investment in the special operations domain. The 75th Ranger Regiment's role inside the US Army, "lead[ing] the way for advancements in training and readiness that bridge the gap

⁸⁶⁸ Dechigi, "Presentation," 5.

between special operations and conventional forces,” provides an excellent example of this idea.⁸⁶⁹

Third, the lack of integration between the assault formations and the conventional infantry units, one the principal weakness ascribable to the *Arditi*,⁸⁷⁰ offers to the modern military officer an opportunity for reflection on the widely discussed topic of the interoperability of special operations units with general-purpose forces. The Italian assault formations suffered from a lack of integration deriving from different factors, first, the distinct combat role assigned from the Army Supreme Command. For a wide variety of reasons, this shortfall spanned not only the tactical level but also the institutional one. In the first case, these issues were chiefly the cause of drawbacks in battle, often leading to unnecessary loss of lives and objectives during the consolidation phase at the end of an attack.⁸⁷¹ This is an important thing to consider, but it also easily predictable.

At the institutional level, instead, the strong underlying aversion that grew in the leadership of the “Big Army” toward the unconventional nature of the *Arditi*,⁸⁷² ultimately damaged the whole institution at large. At the end of the hostilities, without the counterbalance of pragmatic usefulness for “pure” combat formations, this internal

⁸⁶⁹ United States (U.S.) Army, Maneuver Center of Excellence (MCoE), “The Army’s Premier Raid Force,” September 17, 2018, accessed April 26, 2020, <https://www.benning.army.mil/tenant/75thRanger/>.

⁸⁷⁰ Rochat, *The Arditi of the Great War*, 50-51, 93-94, 105.

⁸⁷¹ *Ibid.*

⁸⁷² Di Martino and Cappellano, *The Italian Assault Units in the Great War (1915-1918)*, 1:427-428. See also Pirocchi, *The Arditi*, 99-103.

tension probably accelerated the process of disbandment of the Italian assault battalions without further consideration of the relevance of their doctrinal advancements. The integration of special operations and conventional units is a popular topic in all the modern military organizations, including the Italian Army. However, rarely it receives attention from an institutional point of view. The history of the *Arditi* should caution the military professionals of all branches to refrain from conflicting institutional dynamics because the ultimate price to pay is a deterioration of the effectiveness of the Army at large.

The present work leaves space to further research opportunities, either on the comparison of the *Arditi* with the *Sturmtruppen* or on the Italian assault units alone. In the first case, the juxtaposition of the Italian and German assault formations could be revisited under the lens of the concept of tactical effectiveness, amply debated by the historians Alan R. Millet, Williamson Murray, and Kenneth H. Watman in their article “The Effectiveness of Military Organizations.”⁸⁷³ In the second case, the analysis conducted on the *Arditi* in this thesis could become the first step of an in-depth study on the history and evolution of the Italian special operations units, going through the interwar period and the Second World War, to arrive at the present days.

In conclusion, the *Arditi* represent a significant, yet often disregarded, chapter of Italian military history in World War I. The Italian assault battalions constituted the primary, if not the only, example of true innovation in the organizational domain of the

⁸⁷³ Alan R. Millet, Williamson Murray, and Kenneth H. Watman, “The Effectiveness of Military Organizations,” *International Security* 11, no. 1 (Summer 1986): 37-71, accessed April 18, 2020, <https://www.jstor.org/stable/2538875?seq=1>.

Italian Army in the period 1915-1918, bringing forth one of the most prolific elements of the contemporary Italian military art.⁸⁷⁴ The study of this topic provides an original perspective on the process of the evolution of modern infantry tactics during the Great War, presenting an alternative example to the already famous *Sturmtruppen*.

⁸⁷⁴ Di Martino and Cappellano, *The Italian Assault Units in the Great War (1915-1918)*, 1:257.

BIBLIOGRAPHY

Primary Sources

- Balck, Wilhelm. *Development of Tactics—World War*. Translated by Harry Bell. Fort Leavenworth, KS: The General Service Schools Press, 1922.
- British War Office, General Staff. *Summary of Recent Information Regarding the German Army and His Methods*. London, UK: War Office, January 1917.
- . *Handbook of the German Army in War, April 1918*. London, UK: Harrison & Sons, April 1918.
- Businelli, Alberto. *Gli Arditi del IX [The Arditi of the IX Battalion]*. Milan, Italy: La Libreria Militare, 2007. Translated and quoted in Paolo Morisi, *Hell in the Trenches: Austro-Hungarian Stormtroopers and Italian Arditi in the Great War*. Warwick, UK: Helion & Company Limited, 2018. Kindle edition.
- Carli, Mario. *Noi Arditi [We, Arditi]*. Edited by Gianluca Nesi. Pisa, Italy: Edizioni ETS, 2019.
- Farina, Salvatore. *Le Truppe d'Assalto Italiane [The Italian Assault Troops]*. Edited by Federico Cavallero. Milan, Italy: Edizioni Libreria Militare, 2005.
- Giuliani, Reginaldo. *Gli Arditi: Breve storia dei Reparti d'Assalto della Terza Armata [The Arditi: Short History of the Assault Units of the Third Army]*. Lavis, Italy: La Libreria Militare, 2017.
- Headquarters, Italian Second Army, Intelligence Section. *Gli arditi e la loro tattica nel giudizio e attraverso le impressioni degli ufficiali e della truppa nemica [The Arditi and their tactics in the opinion and according to the impressions of the enemy officers and troops]*. Classified dispatch n. 2372, Isonzo sector, Italian Front: October 11, 1917. Quoted in Salvatore Farina, *Le Truppe d'Assalto Italiane [The Italian Assault Troops]*. Edited by Federico Cavallero. Milan, Italy: Edizioni Libreria Militare, 2005.
- Hemingway, Ernest. “*Riparto d'Assalto.*” In *Three Stories and Ten Poems*. Springfield, MO: Grapevine Publishing Services, 2019. Kindle edition.
- Jünger, Ernst. *Storm of Steel*. Translated by Michael Hofmann. New York, NY: Penguin Books, 2004.
- . *Copse 125: A Chronicle from the Trench Warfare of 1918*. Translated by Basil Creighton. New York, NY: Howard Fertig, Inc., 2003.

- Laffargue, André. *The Attack in Trench Warfare: Impressions and Reflections of a Company Commander*. Translated by an Infantry Officer belonging to the United States Infantry Association. Washington, DC: National Capital Press Inc., 1916.
- Ludendorff, Erich. *My War Memories, 1914-1918*. London, UK: Hutchinson & Co., 1919.
- Rommel, Erwin. *Infantry Attacks*. Translated by Gustave E. Kiddle. Washington, DC: The Infantry Journal, 1944.
- U.S. Army War College. *German and Austrian Tactical Studies: Translations of Captured German and Austrian Documents and Information obtained from German and Austrian Prisoners- from the British, French and Italian Staffs*. Washington, DC: Government Printing Office, 1918.
- U.S. War Department, Historical Section, General Staff, American Expeditionary Forces (A.E.F). *Tactical Studies No. 1: A Survey of German Tactics, 1918*. Washington, DC: Government Printing Office, 1918.
- Wynne, Graeme C. *If Germany Attacks: The Battle in Depth in the West*. Westport, CT: Greenwood Press, 1976.

Secondary Sources

- Alfoldi, Lazlo M. "The Hutier Legend." *Parameters* 5, no. 2 (1976): 69-74. Accessed January 13, 2020. <https://apps.dtic.mil/dtic/tr/fulltext/u2/a531980.pdf>.
- Bailey, Jonathan B.A. "The First World War and the birth of modern warfare." In *The Dynamics of Military Revolution, 1300-2050*. Edited by Williamson Murray and McGregor Knox, 132-153. Cambridge, UK: Cambridge University Press, 2003.
- Bateman, M. Elliot, with S.S. Fitzgibbon, and M. Samuels. "Vocabulary: The Second Problem of Military Reform. I: Concepts." *Defense Analysis* 6, no. 3 (1990), 263-275. Quoted in Martin Samuels, *Doctrine and Dogma: German and British Infantry Tactics in the First World War*. Westport, CT: Greenwood Press, 1992.
- Bull, Stephen. *Stosstrupptaktik: German Assault Troops of the First World War, the First Stormtroopers*. Brimscombe Port, UK: Spellmount, 2014.
- . *Stosstrupptaktik: German Assault Troops of the First World War, the First Stormtroopers*. Brimscombe Port, UK: Spellmount, 2014. Kindle edition.
- . *Trench Warfare*. New York, NY: Sterling Publishing Co., 2003.
- Cardona, Ricardo R. *Sturmtruppen: World War I German Stormtroopers*. Madrid, Spain: Andrea Press, 2014.

- Cati, Italo. “*Il lancia-torpedini Bettica*” [“The Bettica mortar”]. *Bulletin of the Circolo Culturale Armigeri del Piave*, no. 131 (June 30, 1996): 45-50. Accessed March 31, 2020, <http://www.armigeridelpiave.it/SELEZIONI/Lanciatorpedini.pdf>.
- Clausewitz, Carl von. *On War*. Translated and edited by Michael Howard and Peter Paret. Princeton, NJ: Princeton University Press, 1989.
- Dechigi, Cristiano M. “Presentation.” In *I Reparti d’Assalto Italiani nella Grande Guerra (1915-1918)* [*The Italian Assault Units in the Great War (1915-1918)*]. Vol. 1. Edited by Basilio Di Martino and Filippo Cappellano, 5-6. Rome, Italy: Stato Maggiore dell’Esercito in collaboration with Rodorigo Editore, 2016.
- Di Martino, Basilio and Cappellano, Filippo. *I Reparti d’Assalto Italiani nella Grande Guerra (1915-1918)* [*The Italian Assault Units in the Great War (1915-1918)*]. 2 vols. Rome, Italy: Stato Maggiore dell’Esercito in collaboration with Rodorigo Editore, 2016.
- Ellis, John. *Eye-Deep in Hell: Trench Warfare in World War I*. New York, NY: Pantheon Books, 1976.
- Foley, Robert T. “A Case Study in Horizontal Military Innovation: The German Army, 1916-1918.” *Journal of Strategic Studies* 35, no. 6 (December 2012): 799-827. Accessed January 19, 2020. https://www.researchgate.net/publication/241714696_A_Case_Study_in_Horizontal_Military_Innovation_The_German_Army_1916-1918.
- Ghiz, Christopher J. “Specialized Assault Units of the World War I Western Front: A Comparative Study of the German Stormtrooper Battalions and Canadian Trench Raiders.” Master’s thesis, U.S. Army Command and General Staff College, Fort Leavenworth, KS, 2010.
- Gilbert, Martin. *The First World War: A Complete History*. New York, NY: Henry Holt and Company, LLC, 2004.
- Gooch, John. *The Italian Army and the First World War*. Cambridge, UK: Cambridge University Press, 2014. Quoted in Paolo Morisi, *Hell in the Trenches: Austro-Hungarian Stormtroopers and Italian Arditi in the Great War*. Warwick, UK: Helion & Company Limited, 2018. Kindle edition.
- Griffiths, William R. *The Great War: Strategy and Tactics of the First World War*. Garden City Park, NY: One Square Publishers, 2003. Quoted in Paolo Morisi, *Hell in the Trenches: Austro-Hungarian Stormtroopers and Italian Arditi in the Great War*. Warwick, UK: Helion & Company Limited, 2018. Kindle edition.

- Gruss, Helmuth. “*Aufbau und Verwendung der deutschen Sturmabteilungen im Weltkrieg*” [“Build-up and Employment of the German Assault Battalions during the World War”]. Unpublished Ph.D. diss., Berlin University, Berlin, Germany, 1939. Quoted in Bruce I. Gudmundsson, *Stormtroop Tactics: Innovation in the German Army (1914-1918)*. New York, NY: Praeger, 1989.
- Gudmundsson, Bruce I. *Stormtroop Tactics: Innovation in the German Army (1914-1918)*. New York, NY: Praeger, 1989.
- Headquarters, U.S. Marine Corps. Marine Corps Doctrine Publication 1, *Warfighting*. Washington, DC: Government Printing Office, April 2018.
- Headquarters, U.S. Department of the Army. Field Manual 3-0, *Operations*. Washington, DC: Government Printing Office, October 2017.
- House, Jonathan M. *Toward Combined Arms Warfare: A Survey of 20th-Century Tactics, Doctrine, and Organizations*. Research Survey No. 2. Fort Leavenworth, KS: Combat Studies Institute, 1984.
- Howard, Michael. “Men against Fire: The Doctrine of the Offensive in 1914.” In *Makers of Modern Strategy: from Machiavelli to the Nuclear Age*, edited by Peter Paret, 510-526. Princeton, NJ: Princeton University Press, 1986.
- Knox, MacGregor. “Mass politics and nationalism as military revolution: The French Revolution and after.” In *The Dynamics of Military Revolution, 1300-2050*, edited by MacGregor Knox and Williamson Murray, 57-73. Cambridge, UK: Cambridge University Press, 2003.
- Leonard, Matt. “Hill 60.” *Military Times* (June 2011): 64-65. Accessed December 19, 2019. <https://conflictarchaeology1.files.wordpress.com/2011/12/hill-60.pdf>.
- Lupfer, Timothy T. *The Dynamics of Doctrine: The Changes in German Tactical Doctrine During the First World War*. Leavenworth Papers No. 4. Fort Leavenworth, KS: Combat Studies Institute, 1981.
- Millet, Alan R., Williamson Murray, and Kenneth H. Watman. “The Effectiveness of Military Organizations.” *International Security* 11, no. 1 (Summer 1986): 37-71. Accessed April 18, 2020. <https://www.jstor.org/stable/2538875?seq=1>.
- Morisi, Paolo. *Hell in the Trenches: Austro-Hungarian Stormtroopers and Italian Arditi in the Great War*. Warwick, UK: Helion & Company Limited, 2018. Kindle edition.

- . *Fiamme Verdi: I Reparti d'Assalto Alpini nella Prima Guerra Mondiale (Adamello-Val Lagarina-Monte Pasubio-Monte Grappa-Altopiano dei Sette Comuni)* [*Green Flames: the Alpini Assault Battalions in the First World War (Mount Adamello-Lagarina Valley-Mount Paubio-Mount Grappa-Sette Comuni Plateau)*]. Caselle di Sommacampagna (VR), Italy: Cierre Grafica, 2012.
- Murray, Williamson. "Armored Warfare: The British, French and German experiences." In *Military Innovation in the Interwar Period*, edited by Alan Millet and Williamson Murray, 6-49. Cambridge, UK: Cambridge University Press, 1998.
- . "The West at War, 1914-1918." In *Cambridge Illustrated History of Warfare*, edited by Geoffrey Parker, 266-297. Cambridge, UK: Cambridge University Press, 2017.
- Murray, Williamson A., and McGregor Knox. "Thinking about revolutions in warfare." In *The Dynamics of Military Revolution, 1300-2050*, edited by McGregor Knox and Williamson Murray, 1-14. Cambridge, UK: Cambridge University Press, 2003.
- Palmer, Robert R. "Frederick the Great, Guibert, Bülow: From Dynastic to National War." In *Makers of Modern Strategy: from Machiavelli to the Nuclear Age*, edited by Peter Paret, 91-119. Princeton, NJ: Princeton University Press, 1986.
- Paret, Peter. "Napoleon and the Revolution in War." In *Makers of Modern Strategy: from Machiavelli to the Nuclear Age*, edited by Peter Paret, 123-142. Princeton, NJ: Princeton University Press, 1986.
- Parker, Geoffrey. "Introduction: The Western Way of War." In *The Cambridge Illustrated History of Warfare*, edited by Geoffrey Parker, 2-9. Cambridge, UK: Cambridge University Press, 2017.
- Pedri, Paolo. *Il XIX Reparto Alpini d'Assalto in Val Lagarina (1918)* [*The XIX Alpini Assault Battalion in Lagarina Valley (1918)*]. Rovereto (TN), Italy: New-Book Edizioni, 2019.
- Pirocchi, Angelo L. *Arditi: Le truppe d'assalto italiane (1917-1920)* [*The Arditi: the Italian assault troops (1917-1920)*]. Translated by the author. Gorizia, Italy: Libreria Editrice Goriziana, 2011.
- Rochat, Giorgio. *Gli Arditi della Grande Guerra: origini, battaglie e miti* [*The Arditi of the Great War: Origins, Battles and Myths*]. Gorizia, Italy: Libreria Editrice Goriziana, 2018.
- Samuels, Martin. *Command or Control? Command, Training and Tactics in the British and German Armies, 1888-1918*. London, UK: Frank Cass and Co. Ltd., 1995.

———. *Doctrine and Dogma: German and British Infantry Tactics in the First World War*. Westport, CT: Greenwood Press, 1992.

Showalter, Dennis E. "The Prusso-German RMA, 1840-1871." In *The Dynamics of Military Revolution, 1300-2050*, edited by McGregor Knox and Williamson Murray, 92-113. Cambridge, UK: Cambridge University Press, 2003.

Slim, William. *Defeat into Victory: Battling Japan in India and Burma, 1942-1945*. New York, NY: Cooper Square Press, 2000. Quoted in Samuels, Martin. *Doctrine and Dogma: German and British Infantry Tactics in the First World War*. Westport, CT: Greenwood Press, 1992.

Thompson, Mark. *The White War: Life and Death on the Italian Front, 1915-1919*. London, UK: Faber & Faber, 2009. Kindle edition.

Zabecki, David T. *Steel Wind: Colonel Georg Bruchmüller and the Birth of Modern Artillery*. Westport, CT: Praeger Publishers, 1994.