ORGANIZED EFFICIENCY IN A DISORDERED MEDICAL SETTING: THE AMERICAN AMBULANCE IN BESIEGED PARIS, 1870-1871

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ABSTRACT

The American ambulance, which toiled in besieged Paris from the fall of 1870 until the spring of 1871, was one of the most acclaimed medical facilities of the Franco-Prussian War. This study addresses why the American ambulance garnered such widespread approval during this conflict, and the answer to this question reveals as much about the French medical services in 1870 and 1871 as it does about the American ambulance itself. This work argues that the consistent praise for the American ambulance resulted from the disparity between the sanitary conditions, organization, and surgical success of the American facility and those of the majority of French hospitals and ambulances laboring during the Franco-Prussian War. In contrast to the American ambulance, the French-sponsored medical facilities were disorganized and unprepared for the evacuation and treatment of the wounded. This study will demonstrate that neither the French army medical corps nor France’s Red Cross society was prepared to manage the medical stresses of a major conflict, and this lack of preparation contributed significantly to the sanitary disaster on the battlefields and in besieged Paris in 1870 and 1871. While the long-term medical influence of the American ambulance was limited, the historical contribution of this ambulance relates to its illustrating the deficiencies—and the wartime consequences of these deficiencies—of certain organizations that France’s government targeted in the years of reform following the Franco-Prussian War.
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DEDICATION

I dedicate this thesis to my parents, Stephen and Marlene Seltzer, who have stood behind me with love and unwavering support in my decision to pursue my interest in French history.
In 1970 Valentine A. J. Swain, the Senior Surgeon at London’s Queen Elizabeth Hospital for Children, wrote, “Though the military, political, and strategic aspects of the Franco-Prussian War have been fully recorded, little attention has been given to the medical side of this bitter struggle.” Although not as applicable today, Swain’s comment is valid with respect to detailed studies of the American ambulance. This service, which toiled in besieged Paris from the fall of 1870 until the spring of 1871, was one of the most acclaimed medical facilities of the Franco-Prussian War. This study addresses why the American ambulance garnered such widespread approval during this conflict, and the answer to this question reveals as much about the French medical services in 1870 and 1871 as it does about the American ambulance itself.

This work argues that the consistent praise for the American ambulance resulted from the disparity between the sanitary conditions, organization, and surgical success of the American facility and those of the majority of French hospitals and ambulances laboring during the Franco-Prussian War. In contrast to the American ambulance, the French-sponsored medical facilities were disorganized and unprepared for the evacuation and treatment of the wounded. This study will demonstrate that neither the French army medical corps nor France’s Red Cross society was prepared to manage the medical stresses of a major conflict, and this lack of preparation contributed significantly to the sanitary disaster on the battlefields and in besieged Paris in 1870 and 1871.

While the long-term medical influence of the American ambulance was limited, the historical contribution of this facility relates to its illustrating the deficiencies—and the wartime

consequences of these deficiencies—of certain organizations that France’s government targeted in the years of reform following the Franco-Prussian War. The American ambulance exemplifies Jean de Blonay’s conclusion that the war’s surgical results “allowed, above all, the bringing to light [of] the French health care system’s shortcomings as well as the beginning ills of the Red Cross societies.”

In 1870 the term “ambulance” had a less exclusive meaning than its present-day definition. Bertrand Taithe indicates that the term “ambulance” had “the double meaning of [a] wagon or carriage designed to transport wounded patients, and that of an improvised field hospital usually of more than six beds.” Caroline Moorehead provides a broader definition for a nineteenth-century ambulance: “Anything from a single cart collecting the wounded, to field hospitals, first-aid stations, buildings given over to temporary hospitals and entire self-sufficient medical units, with surgeons, priests, nurses, carriages, horses, and all food and medical supplies. They could move or stay still and consisted of buildings, vehicles or groups of people.”

To distinguish between the vehicle used to transport the wounded and the temporary medical facility, the term “ambulance” will refer only to a temporary hospital containing at least six beds in the current study.

On 19 July 1870 France’s Emperor Napoleon III declared war on Prussia. France suffered its first major defeats in early August, and on 2 September Napoleon III surrendered to the Prussian forces at Sedan. News of the Emperor’s capitulation reached Paris the following day, and on 4 September the city’s republican deputies announced the fall of the Second Empire.

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2 Jean de Blonay, 1870: une révolution chirurgicale: les origines et le développement de la chirurgie civile et militaire moderne (Vevey: Éditions Delta, 1976), 133. Except for secondary sources of quotation, all translations are mine.


4 Caroline Moorehead, Dunant’s Dream: War, Switzerland and the History of the Red Cross (New York: Carroll and Graf Publishers, 1999), 67.
and the formation of the Third Republic. As Melvin Kranzberg notes, however, “The defeat at Sedan did not mean the end of the war; it merely meant the closing of one phase of the campaign and the opening of another.” This second phase of the Franco-Prussian War was the siege of Paris, which began when the Prussians completed their encirclement of the French capital on 19 September 1870. Prior to this date, Paris increasingly took the form of what one ambulance surgeon referred to as a “giant hospital,” in which private residences, hotels, theaters, and government buildings became ambulances and hospitals.

The French forces attempted three disastrous sorties from Paris during the siege, suffering 12,000 casualties following the Champigny sortie of 30 November, 983 after the Le Bourget sortie of 21 December, and 8,000 following the Buzenval sortie of 19 January 1871.

Nearly four months after the siege began—months in which the Parisians suffered from shortages of food, medical supplies, fuel, and information—Prussian artillery units began hurling shells into the city on 5 January 1871, and on 28 January the French government agreed to an armistice with recently unified Germany, thus ending the siege.

Aside from being a devastating defeat for the French and the nascent Third Republic, the Franco-Prussian War was the first conflict to witness both the widespread application of the 1864 Geneva Convention and the extensive participation of voluntary aid societies from across Europe. John Hutchinson explains that this conflict was “a watershed in the history of the relationship between war and charity: It provided opportunities for the aid societies of

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6 George Halstead Boyland, Six Months under the Red Cross, with the French Army (Cincinnati, Ohio: Robert Clarke, 1873), 232; Taithe, Defeated Flesh, 74.

belligerents and neutrals to demonstrate their utility to army medical services and to the wounded themselves." During the war, civilian misuse of both medical-volunteer status and the Red Cross symbol, the emblem for these voluntary organizations, were frequently cited reminders of the deficient preparations of France’s aid organizations. As the Geneva Convention ultimately left the decisions to regulate the use of the Red Cross symbol and to develop functioning aid societies to each individual nation, France took few initiatives prior to 1870.

The road to the 1864 Geneva Convention began on 9 February 1863, as Gustave Moynier, president of the Geneva Society for Public Utility, and four other individuals met in Geneva to discuss the feasibility of establishing voluntary relief committees and national aid societies for the wounded. Taking the bloody 1859 engagement at Solferino as evidence, Moynier and his colleagues recognized that military doctors, nurses, and field hospitals were not providing adequate succor to injured soldiers. Henri Dunant, a witness at Solferino and the primary advocate for the potential usefulness of voluntary aid societies in wartime, offered his suggestions, which included “not simply sending volunteer nurses to the battlefield, but…improvements of methods of transporting the wounded, as well as the care of soldiers in hospitals.” Dunant also envisioned “a permanent committee…working to make it easier to dispatch relief in wartime…, a committee that would be able to draw up a covenant, signed by all civilized powers, which would agree to adhere to some basic code of behavior in wartime.”

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9 Hutchinson, 23.
10 Hutchinson, 11.
11 Moorehead, 16.
12 Moorehead, 16.
Moving to realize these ambitious goals, the five individuals formed the International Committee for the Assistance to Sick and Wounded Soldiers on 17 February and resolved to encourage governments throughout Europe to establish similar organizations.\(^{13}\) Moreover, the International Committee planned for a larger international meeting slated for the summer of 1864. Prior to this more extensive convention, representatives from sixteen states gathered in Geneva in October 1863. These delegates formally decided “to support the establishment of committees of relief in all countries, the neutralization of personnel caring for the wounded, and the neutralization of the wounded themselves” and designated a red cross on a white armband as the approved badge of the neutral medical personnel.\(^{14}\)

In August 1864, delegates from sixteen states met in Geneva for the International Conference for the Neutralization of Army Medical Services in the Field, and on 22 August envoys from twelve of these states signed the Geneva Convention, also known as the Convention for Bettering the Condition of Wounded Soldiers.\(^{15}\) Nations whose representatives signed the 1864 Geneva Convention accepted the rules, prepared during the October 1863 meeting, for the neutralization of medical personnel and of the wounded and for the symbol of a red cross on a white background.\(^{16}\) The Geneva Convention did not contain any wording regarding the official recognition of aid societies but instead allowed each participating state the freedom “to do as

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\(^{13}\) Hutchinson, 23; Hutchinson indicates that in an effort to give the relief movement more coherence, the International Committee urged all national central committees to incorporate the term “Red Cross society” into their names in the 1870s (the International Committee renamed itself the International Committee of the Red Cross by 1884), 6.


\(^{15}\) Hutchinson, 45, 50; Geoffrey Best, *Humanity in Warfare* (New York: Columbia University Press, 1980), 150. Best lists the twelve original states: Baden, Belgium, Denmark, France, Hesse, Italy, the Netherlands, Portugal, Prussia, Spain, Switzerland, and Württemberg, 344, n.34.

\(^{16}\) Haller, 64.
much or as little as it wished to encourage the development of a national society to aid the wounded.”

Describing the Geneva Convention’s “radically new approach” to the battlefield recognition of the neutrality of all aid personnel, Geoffrey Best asserts that this neutralization principle “proclaimed the supremacy of the humanitarian ideal and purpose above immediate military consideration and intruded boldly into the military’s normal territory.” As Taithe explains, “The idea of neutrality as a contractual obligation between two enemies was first extended to include civilians during the Franco-Prussian War.” Problematically though, the 1864 Geneva Convention lacked adequate measures to dissuade individuals from abusing the neutrality statute and the Red Cross emblem in order to protect their property and to avoid military service; during the Franco-Prussian War and the siege of Paris, numerous eyewitnesses testified to these forms of misuse. Hutchinson notes, “It is remarkable that none of the delegates foresaw the likelihood that it [the section of the Convention, Article 5, explaining neutrality] would be abused.”

Later international meetings also failed to address this issue. In Paris the 1867 International Conference of Societies for the Relief of the War Wounded resulted in suggestions for the modification of the Geneva Convention, such as the adoption of statutes for maritime warfare, but these recommendations required another international conference so that all the

17 Hutchinson, 46, 53.
18 Best, 150.
20 Best claims that demands for the restructuring of the 1864 Convention “were founded largely on the experience of the Franco-Prussian War,” 151.
21 Hutchinson, 49.
signatories of the 1864 document could give their approval.\textsuperscript{22} Assessing the impact of the 1867 conference, Hutchison concludes,

> The organizers of the Paris conference had grossly underestimated how much time would be needed to consider both the proposed revisions…and the many unanswered questions about the composition and workings of the aid societies….With more issues raised than answered, the conference came to an end.\textsuperscript{23}

Another gathering in Geneva in October 1868 furthered the discussion of the proposals from 1867, but the delegates rejected important additional suggestions, including a plea for strict oversight of the use of the Red Cross symbol and a request for a course of action to ensure that governments familiarize military personnel with the Geneva Convention.\textsuperscript{24} The second international conference of aid societies convened in Berlin at the end of April 1869, and the results of this meeting were somewhat ambiguous: “The delegates left Berlin having discussed what might be done during peacetime without ever committing themselves to do anything in particular beyond preparing for war.”\textsuperscript{25} Between 1864 and the commencement of the Franco-Prussian War in 1870, the Geneva Convention retained, for the most part, its original format and was not updated until 1906.\textsuperscript{26}

The current work draws on a number of texts about the Franco-Prussian War, the siege of Paris, voluntary aid societies, medicine, and military surgery. An overview of the relevant English-language literature, primary and secondary, precedes a similar outline of a selection of French-language sources. This historiographical summary demonstrates that while texts have

\begin{footnotesize}
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\item \textsuperscript{22} Hutchinson, 80-81.
\item \textsuperscript{23} Hutchinson, 84.
\item \textsuperscript{24} Hutchinson, 90-91. Hutchison adds that the first recommendation was rejected because of the lack of ideas for implementing controls and the second because the delegates concluded that the responsibility of advising a state’s military on the Geneva Convention rested with each individual state, 91. Prior to this meeting, some of the delegates called for a reassessment of the entire 1864 Convention, but Moynier adamantlly disagreed, fearing that such a review would result in the abandoning of the original document in particular and of voluntary aid in general, Moorehead, 58.
\item \textsuperscript{25} Hutchinson, 102; for a thorough explanation of the developments from the 1867 Parisian conference through the assembly in Berlin, see, Hutchinson, 79-102.
\item \textsuperscript{26} Best, 151.
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described the American ambulance, few studies analyze the reasons and implications for this service’s success. Additionally, this summary examines some of the conclusions reached in research pertaining to France’s Red Cross organization and French military medicine at the time of the Franco-Prussian War.

Numerous eyewitness accounts of the siege portrayed the American ambulance as a superior medical institution, but these reports often lacked a comprehensive analysis of this American facility. For instance, Elihu Washburne, the United States Minister to France, proclaimed that “this ambulance is winning golden opinions from all sorts of people. It is by far the most perfect of any here.”27 The most thorough work remains Dr. Thomas W. Evans’ lengthy 1873 book entitled History of the American Ambulance Established in Paris during the Siege of 1870-71, Together with the Details of Its Methods and Its Works. In addition to his own opening chapter, Evans, who provided the impetus for the formation of the American ambulance, included sections from other Americans who volunteered for the American ambulance, notably Dr. Edward A. Crane, Dr. John Swinburne, and Dr. William Johnston. Indeed, Evans cobbled together a valuable work rich in detail, but it is important to evaluate his opinions critically. As a historian who has written about Evans notes, “Excessive modesty was not a prominent characteristic of Tom Evans.”28 Another significant contemporary work is Charles Gordon’s Lessons on Hygiene and Surgery from the Franco-Prussian War. Gordon, a British surgeon in France during the war and siege, included details about the French army medical service, war surgery, and the American ambulance in this 1873 publication.

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27 E.B. Washburne, Recollections of a Minister to France, 1869-1877 (New York: Charles Scribner’s Sons, 1889), 1:245.
Gerald Carson and Henry Rainey have published books about Dr. Thomas Evans, but Carson’s work contains more-relevant information about the American ambulance. In *The Dentist and the Empress: The Adventures of Dr. Tom Evans in Gas-Lit Paris*, Carson includes a discussion of Evans’ pre-1870 interest in voluntary aid societies and a short but informative chapter on the establishment and performance of the American ambulance. Another work, entitled *A Typical American; Or, Incidents in the Life of Dr. John Swinburne of Albany, the Eminent Patriot, Surgeon, and Philanthropist*, depicts the life of Swinburne, the Surgeon-in-Chief of the American ambulance. While this text has approximately thirty pages of material about the American ambulance, this source relies primarily on long quotations from other authors, especially Evans and Gordon.

Recent histories of the Red Cross characterize France’s aid society from its formation through the Franco-Prussian War as disorganized and unprepared for the task of effectively supplying aid to the wounded. While these assessments of the society’s prewar developments are accurate, one scholar’s recent assertion seems problematic. Caroline Moorehead suggests that despite its initial unpreparedness, the French Society “had even more reasons [than the German Society] to feel pleased” with its performance in the Franco-Prussian War. As evidence, she indicates that the French Society lacked supplies in July 1870, but by the end of the conflict, this organization “had raised over 18 million francs and another 4 million more of relief, and treated 340,000 casualties, at the cost of just eight [lives] of its members.” Moorehead, however, does not address the questions of the effective distribution of these funds.

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29 Hutchinson, 109-117. Older published articles address voluntary aid during the Franco-Prussian War; yet, these works tend to focus on a single volunteer ambulance or hospital service, and the authors chose subjects other than the American ambulance. See, for example, Swain’s article and John Fleetwood, “An Irish Field-Ambulance in the Franco-Prussian War,” *The Irish Sword* 6, no. 24 (summer 1964): 137-148.
30 Moorehead, 83.
31 Moorehead, 83.
and of the quality of relief that soldiers received. Moorehead notes, “For the International Committee, the Franco-Prussian war [sic] was a victory, even if a flawed one,” but the present author does not support her contention that the Franco-Prussian War was, for the two voluntary organizations most intimately involved, “A test that both had passed with glory.” When referencing the American ambulance, Red Cross historians such as Moorehead point out that this facility was “the best ambulance, in which a man could actually hope to survive the war.”

As the second half of the nineteenth century saw important developments in medicine, surgery, and the understanding of germs, histories of medicine often include discussions of the Franco-Prussian War. Citing this conflict, these historians tend to highlight the partial incorporation of antiseptic practices, and with regard to the French medical facilities, the poor surgical results and high mortality rates.

Published English-language sources about the siege of Paris contend that the American ambulance was an example of quality medical care within the besieged city, but many of these sources do not offer much detail about the reasons for the American ambulance’s success. For example, in his social history of the siege, Kranzberg includes a paragraph about the American ambulance, indicating that Evans and his countrymen “had set up a hospital for the wounded which was one of the best in Paris.” Similarly, Alistair Horne discusses the American

32 A volunteer surgeon argued that the French Society “has to a certain extent failed in its mission. No doubt it has done much good, but not proportionate to its resources,” William MacCormac, Notes and Recollections of an Ambulance Surgeon, Being an Account of Work Done under the Red Cross during the Campaign of 1870 (London: Churchill, 1871), 26.
33 Moorehead, 82; the present author favors Taithe’s opinion that France’s performance in 1870 “was not likely to inspire confidence either in the role of aid societies or in the utility of the Geneva Convention,” Defeated Flesh, 117.
34 Moorehead, 79.
36 Kranzberg, 67.
ambulance for approximately two pages, succinctly explaining the formation of the ambulance and praising the service and its “miraculous” surgical results.\(^{37}\)

Other works that cover the siege of Paris focus on the shortcomings of the French medical services. Robert Baldick writes about individuals volunteering for ambulances in order to avoid military service, and Rupert Christiansen describes the “hopelessly unsanitary” conditions in temporary hospitals such as the Grand Hôtel.\(^{38}\)

Two additional works proved especially useful for the current text. First, Taithe’s *Defeated Flesh: Medicine, Welfare, and Warfare in the Making of Modern France*, published in 1999, blends discussions of nineteenth-century medicine, voluntary aid, the Franco-Prussian War and the siege of Paris, and the Paris Commune in order “to analyze not only how the war was lived but also how it was narrated and remembered, and how acts of remembrance shaped the aftermath of the conflict.”\(^{39}\) The current study includes additional writings by Taithe, but *Defeated Flesh* is used the most. In this original and cerebral work, Taithe relies on an impressive number of archival sources and published literature to show that “the defeat of the flesh became the central metaphor of French representations of the war after 1870.”\(^{40}\) To explain this metaphor, Taithe suggests that the collective failure of the French from 1870 to 1871 “was the sum of their individual experience. The defeat was in the flesh.”\(^{41}\)

The most informative secondary text on Dr. Thomas Evans and the American ambulance—and a text which Gerald Carson cites—is Anthony Douglas Branch’s unpublished 1971 Ph.D. dissertation from the University of California Santa Barbara. This work, “Dr.
Thomas W. Evans, American Dentist in Paris, 1847-1897,” examines Evans’ life and experiences, including information relevant to the current work. For instance, Branch analyzes the movement to reform the French army medical service prior to the Franco-Prussian War and why these restructuring attempts failed. Branch also discusses the formation of the American service, the praise it received, and the poor sanitary conditions in other ambulances and temporary hospitals during the siege in a chapter entitled “Dr. Evans, the Franco-Prussian War, and the American Ambulance.”

Compared to the available English-language texts, there is a greater number of primary and secondary French-language works that relate medicine and voluntary aid to the Franco-Prussian War and the siege of Paris. Similar to foreigners’ accounts of the war and of the siege, many French eyewitness reports contained descriptions of the various ambulances and temporary hospitals that worked across France and in Paris, the American ambulance included. The French opinions of the American facility generally reflected foreigners’ favorable portrayal of the ambulance. Alexandre Piedagnel, for example, described the American ambulance as “truly picturesque” and praised the service’s administration and surgical accomplishments. Compared to foreign witnesses, contemporary French writers generally provided more-detailed lists about the different Parisian medical facilities.

Marie Raoul Brice and Maurice Bottet co-authored a 1907 study of France’s military medical service. These authors commented on the difficulty of assembling a medical history of the siege of Paris, pointing out that “all the documents are scattered; it is tricky to coordinate them, because the entry and exist registers of hospitals or ambulances were kept in different

43 See, for example, Piedagnel’s work in its entirety and Auguste Cochin, Le service de santé des Armées avant et pendant le siége de Paris (Paris: A. Sauton, 1871), 67-78.
ways in the various establishments.” In 1976 Jean de Blonay published a work on surgery and the Franco-Prussian War entitled *1870: une révolution chirurgicale: les origines et le développement de la chirurgie civile et militaire moderne*. Blonay argues that after this conflict, surgeons displayed more confidence in the application of science to surgery: “…They [surgeons] were confident that science would constantly offer them new ways to improve their results. From this certainty would come a generation of pioneers who, in thirty years, would cement the basis of modern surgery.” Taithe, however, questions this interpretation, suggesting that Blonay is among the group of historians of medicine who have “taken too literally the claims published over the following fifty years [after the war] that this conflict enabled scientific developments, that it was a war won by innovation, efficiency and progress.”

Marcel Guivarc’h presents a thorough analysis of medicine and the Franco-Prussian War in his 2006 publication *1870-1871: Chirurgie et médecine pendant la guerre et la Commune: un tournant scientifique et humanitaire*. This text is the most recent detailed-examination of the subject, but, unfortunately, few copies of this work exist. Guivarc’h notes the shortage of medical histories of the ten-month period from July 1870 to May 1871—consisting of the Franco-Prussian War, the siege of Paris, and the Paris Commune—maintaining that “the major role of private Ambulances [sic] is evaded, those of doctors are obscured except for anecdote or their political or social impact.” Guivarc’h addresses different features of medicine and surgery as they relate to this ten-month span. He discusses the prewar lack of understanding of antisepsis and asepsis and explains that the combined wartime medical efforts “prov[ed] more

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45 Blonay, 137.
46 Taithe, *Defeated Flesh*, 47.
fruitful…than [results] in the academic circles.” Guivarc’h also wrote an article in 2007 on civilian ambulances during the Franco-Prussian War, but this publication is not as well argued as his 2006 work. This article, which is referenced earlier in this section, elaborates on the formation and composition of ambulances and is useful for its description of the efforts to coordinate the numerous ambulances in besieged Paris in an attempt to organize the city’s unwieldy aid system.

The current study explores why the American ambulance was one of the most acclaimed medical facilities of the Franco-Prussian War. Comparing the physical structure and treatment methods of—and the contemporary reactions to—the French medical facilities with those of the American ambulance, this work argues that the American service’s acclaim resulted from the stark contrast between the unsanitary disorder of the French hospitals and ambulances and the efficient organization of the American ambulance.

By examining the prewar elements of France’s medical education system, hospitals, military medical service, and Red Cross society, Chapter 1 will show that the disorganization and lack of resources in France’s civilian and military aid-services contributed most significantly to the nation’s poor medical performance during the war and the siege. Chapter 2 analyzes the ways in which these prewar deficiencies contributed to the sanitary chaos within French-sponsored ambulances in besieged Paris and establishes the setting in which the American ambulance worked. The investigation of the American ambulance in Chapter 3 reveals that efficient organization was the crucial element—instead of innovative treatment or superior medical knowledge—for this facility’s comparative medical success during the siege and for the public’s admiration of this service. The final section will demonstrate that the long-term medical

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influence of the American ambulance’s work was limited, which is attributable to the following facts: the American ambulance’s success primarily depended on an efficient organization that contrasted to France’s medical failures; Germany, having soundly defeated France, stood as the model that France would imitate or oppose; and the Franco-Prussian War occurred on the cusp of breakthroughs in the understanding of germs. The historical contribution of this ambulance relates to its illustrating the deficiencies—and the wartime consequences of these deficiencies—in certain organizations that the Third Republic’s leaders targeted in the years of reform following the Franco-Prussian War.

While describing the history of medicine as “a patchwork of ideas and institutions, theory and practice, craft and science, involving divided and vying professional factions,” Porter argues that the increase in the understanding of bacteriology during the latter part of the nineteenth century “brought one of medicine’s few true revolutions,” 428.
CHAPTER 1 - THE DEFICIENT PREPARATIONS OF BOTH THE FRENCH ARMY MEDICAL CORPS AND THE FRENCH AID SOCIETY BEFORE 1870

This chapter will assess certain elements of France’s pre-1870 medical system, namely, medical education, civilian and military hospitals, and the military medical corps and voluntary aid service. The Franco-Prussian War “came to the very doorstep of a city [Paris] which had been a Mecca for the study of science and medicine,” and the French defeat seemed to indicate a low point for French medical education and science in the second half of the nineteenth century.\(^5^0\) Despite this characterization, France’s failure to establish a reliable aid service—military or civilian—in the years leading up to the war contributed most significantly to the ineptitude and poor surgical results of French medical facilities during the Franco-Prussian War and the siege of Paris.

Some of France’s prewar medical deficiencies, such as a limited comprehension of the causes of infection, were not unique to France but were part of the larger medical environment of the time. The Franco-Prussian War occurred during a period of transition in the understanding of germs. Before 1870 sanitary conditions in medical facilities and surgeons’ hygienic measures varied from location to location. The understanding of microorganisms increased during the 1870s, but through the 1860s, “Operating theatres contained surgeons in frock coats, sinks with brass taps, china basins, and buckets of sand with which to mop up the blood spilt on the floor.”\(^5^1\) Highlighting the hospital practice of reusing surgical instruments, linens, and wound dressings, Guivarc’h notes that “the lack of understanding of antisepsis and of asepsis appears stunning to


us today.”

Joseph Lister’s March 1867 publication on the antiseptic benefits of carbolic acid, also known as phenol, did find support prior to 1870; however, the full implications of his findings were not widely understood until after the Franco-Prussian War. In 1870 Lister prepared a special article on an antiseptic treatment for war injuries that was intended for all field surgeons working in the Franco-Prussian War, but few surgeons followed his instructions.

When used, antiseptics were not always effective when coupled with the incomplete knowledge of germs. As Douglas Fermer explains, “Even when antiseptic dressings were applied, they were of little value once the surgeon’s probing fingers or instruments, or fragments of cloth driven into the wound, had introduced infection.” Fermer’s comment demonstrates how developments in science did not necessarily translate into immediate change within medical facilities. Wangensteen and Wangensteen describe this disconnect between theory and practice in more detail:

It is a serious indictment of the [surgical] profession that despite the work of Semmelweis (1847, 1871), Pasteur (1860-78), Lister (1867-71), and Koch (1876-78), the “pus-pail” survived in the finest surgical clinics of France, Britain, Germany, and America into the late 1870s. The wounds of large numbers of patients in quick succession were swabbed with a single sea sponge dipped into the same container. Surgeons, obviously, were slow to accept the factual scientific evidence as meaningful for their own work. Actually, it was not a matter of ignorance, but the sad travesty of not believing what they heard or saw and an unwillingness to test the new proposals for wound management.

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54 Owen H. Wangensteen and Sarah D. Wangensteen, The Rise of Surgery: From Empiric Craft to Scientific Discipline (Minneapolis: University of Minnesota Press, 1978), 512; Lister encouraged battlefield surgeons “to irrigate wounds with a 5 percent solution of phenol, to leave gunshot wounds open, and to let the long ligatures on blood vessels emerge from the lower angle of wounds.” Wangensteen and Wangensteen, 512.
56 Wangensteen and Wangensteen, 363.
French surgeon Auguste Nélaton’s method of antisepsis provides an example of the incomplete application of a still-emerging scientific development to medical practice. Nélaton used alcohol as an antiseptic wound dressing with success during the 1860s, but “had he and his associates been alert to the teachings of Pasteur…and the earlier significant work of Semmelweis…, Nélaton undoubtedly would have had a broader view of the problem of wound infection.”

With an exclusive focus on the sanitation of the wound that ignored the surgeon’s hands, surgical instruments, and operating materials, Nélaton’s antisepsis technique was, therefore, incomplete.

France, especially Paris, gained a reputation as the leader in modern medical education at the close of the eighteenth century. Paris developed international renown through the 1850s, with multiple centralized hospitals functioning as teaching centers for students and physicians. According to John Harley Warner, “In 1845 the Paris School had reigned as unquestionably the leading place for professional improvement. It was secure not only in its status as the center of medical science but also…in its reputation as a clinical school unparalleled in the access students could gain to the bedside for modest fees.”

An American medical student’s description of his experience in Paris in the first half of the nineteenth century reflected Paris’ medical prominence: “The hospitals of Paris deserve the fame, which they enjoy throughout the world, of being the best in existence, on every account.”

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57 Wangensteen and Wangensteen, 315.
58 Wangensteen and Wangensteen, 314.
medicine by citing the city’s large number of hospitals and the renowned physicians working in these institutions. He stressed the contrast between the French doctors, “Men of eminence in their profession,” and American physicians, “A large portion…are indebted for their situations to rich relations, or powerful friends, and not to their genius.”

Over the second half of the nineteenth century, France gradually lost its premier status in medical science to German-speaking centers such as Vienna and Berlin. The fluctuating reputation of nineteenth-century French medicine has been a popular topic among medical historians, but Warner addresses this subject in the manner most germane to the current work. Analyzing the relationship between American medical students and French medical education, he asserts that by 1855, “The singularity of Paris seemed less self-evident. Some observers had been voicing qualified concern that the standards of the Paris School were slipping. At the same time, occasional reports were newly enthusiastic about the potential of German-speaking clinics as places of study.” Moreover, the increasingly limited access to private clinical teaching in Paris after 1850 enhanced the appeal of the laboratories and clinics in German-speaking cities. Although foreign medical students continued to visit in Paris and its hospitals during the 1860s, many of these foreigners, particularly Americans, “Paused briefly to see the sights [in Paris] before heading on to Vienna or Berlin and getting down to serious work.” Warner concludes,

Even if we do not accept at face value the declensionist [indicating a decline] rhetoric that came to permeate French scientific and medical culture, French medical science and institutions were slipping behind their German counterparts [after midcentury]. Nevertheless, the visibility of French medicine in late-nineteenth-century America...was

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63 Gardner, 19, 77.
64 Gardner, 77.
66 Warner, 301.
67 Warner, 301, 313.
68 Warner, 314.
far more pronounced than most historians, preoccupied with tracking the rise of German medicine, have noticed.\textsuperscript{69}

Such historians, most prominently Erwin H. Ackerknecht in \textit{Medicine at the Paris Hospital, 1794-1848}, attribute the decline of French medical science to the mid-nineteenth-century triumph of German laboratory medicine over the clinical medicine for which Paris had been renowned.\textsuperscript{70}

The Franco-Prussian War appeared to represent France’s loss of prestige as a center of medical education and science in the second half of the nineteenth century. As Taithe explains, “French medicine in 1870 was in a state of political crisis denounced by many. Parisian medicine…did not enjoy the scientific prominence and the international cultural hegemony of the first half of the century.”\textsuperscript{71} Like Warner, Taithe cautions that this decline in the second half of the nineteenth was not as absolute as some historians suggest. Scholars who characterize the Franco-Prussian War as an indication of French clinical medicine’s slide and German laboratory medicine’s ascendancy often view the defeat as “more symptomatic than determinant” of France’s decline, and the result is that the conflict itself loses “some of its intensity as a period of change and opportunity.”\textsuperscript{72} Taithe, however, suggests that portrayals of a clear scientific division between France and Germany during this time are reasonably valid.\textsuperscript{73} Harry W. Paul provides an uncomplicated description of the changing status of French science from the eighteenth through the nineteenth centuries: “From about 1750 to 1840 France enjoyed scientific preeminence in Europe. Later in the nineteenth century, the rise of German and British scientific research had

\begin{itemize}
\item \textsuperscript{69} Warner, 314.
\item \textsuperscript{70} La Berge and Hannaway, 5, 45.
\item \textsuperscript{71} Bertrand Taithe, \textit{Defeated Flesh: Medicine, Welfare, and Warfare in the Making of Modern France} (Lanham, Md.: Rowman and Littlefield, 1999), 48.
\item \textsuperscript{72} Taithe, \textit{Defeated Flesh}, 46.
\item \textsuperscript{73} Taithe, \textit{Defeated Flesh}, 46.
\end{itemize}
the comparative effect of reducing France to one [emphasis original] of the centers of science in the Western world.”

The structure of France’s medical education system was outdated in 1870. Created during the First Empire in the early nineteenth century, this system was not significantly altered until 1870. According to George Weisz, medical education remained unchanged “not because it functioned satisfactorily: programs failed to keep up with developments in science, and teaching continued to be based on dogmatic lectures before large audiences. The system was able to survive because élite medical training went on outside the faculties.” Considered in its entirety, French medical science, while experiencing a declining international reputation leading up to the Franco-Prussian War, ultimately did not affect the nation’s poor medical performance during the conflict as much as did the prewar deficiencies within France’s hospitals and especially in the country’s civilian and military aid-services.

Unsanitary conditions were not unfamiliar in hospitals during the nineteenth century. In the early nineteenth century, “Going to hospital…was an experience to be avoided at all costs.” At times, the number of cases of hospital gangrene reached “epidemic proportions,” and, as Roy Porter explains, “The problem was all too familiar and seemed insoluble: fatalism resulted.” In the second half of the nineteenth century, hospitals “continued to symbolize suffering and

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78 Porter, 369.
death.”79 For instance, a writer in a French medical journal, certainly exaggerating to make his point, defined a hospital as “the best place to put a sick person in order to kill them.”80 This association between hospitals and death continued through the period of the Franco-Prussian War. In 1869 Dr. James Simpson coined the term “hospitalism” to describe “the prevailing unsanitary conditions in which patients newly entered contracted erysipelas and other contagious diseases.”81

Considering the generally negative reputations of hospitals, certain observers seemed particularly appalled with the French institutions. Although impressed with the composure and skill of French surgeons, American medical students found certain aspects of Parisians hospitals unsatisfactory, specifically “the lack of cleanliness, the absence of proper ventilation, the paucity of well-trained nurses, and, above all else, neglectful postoperative treatment and attention.”82 Taithe echoes this sentiment: “The great wards of Parisian hospitals still functioned uniformly and indiscriminately. The isolated patients could still be treated by martyrdom-seeking nuns without much protection.”83 In 1858 George Suckley described the “wretchedly ventilated wards” in many of Paris’ hospitals and asserted that such facilities “are a standing reproach to this nation [France], believing itself and boasting that it is at the head in medicine as well as in the other sciences.”84 Writing from Paris in September 1861, Dr. Marion J. Sims, who led the Anglo-American ambulance during the Franco-Prussian War, expressed similar discontent: “I am utterly amazed at the ignorance of French surgeons on some subjects. For instance, in

80 Noël Pascal, Le Mouvement médical, 21 February 1869; quoted in Ellis, 46.
81 Wangensteen and Wangensteen, 347.
82 Blumenthal, American and French Culture, 414.
83 Taithe, Defeated Flesh, 58.
hospital practice almost all cases of amputation die. I am very sure I see the true cause, and if I had time I would pitch in for a complete revolution in the art of dressing wounds here." As a reminder of the hospital environments of the time, Sims added that a similar procedure in New York would probably have the same outcome.86

French physicians and surgeons also debated the adequacy of the sanitation in the country’s medical facilities. During an 1861 session of the French Imperial Academy of Medicine, members questioned the cleanliness of Parisian hospitals when compared with medical facilities in Great Britain; a portion of the doctors believed that “the better hygienic conditions in British hospitals accounted for their lower mortality, justifying the performance of operations too dangerous for Paris.”87 Doctors presented their differing views: Dr. Jean-François Malgaigne argued that the Parisian hospitals “were probably the most detestable in Europe,” but Dr. Alfred Velpeau countered by claiming that postoperative mortality rates were the same in Paris as elsewhere.88

On the whole, deficiencies in sanitation characterized Parisian hospitals leading up to the Franco-Prussian War. Despite the intermittent development of hygienic practices in French medical facilities, prewar Parisian hospitals continued to experience a dreadful number of postoperative deaths from infection.89 Surgery during the Franco-Prussian War and the siege of Paris reflected the “appalling figures of established civilian hospitals.”89 A comparison of mortality rates following surgery in civilian hospitals in London and in Paris provides an example of the generally poor sanitary conditions in Parisian hospitals. Statistics gathered by Dr. Matthew

86 Sims, 355.
87 Wangensteen and Wangensteen, 335.
88 Wangensteen and Wangensteen, 335-336.
89 Guivarc’h, Chirurgie et médecine, 30.
90 Taithe, Defeated Flesh, 59.
Berkeley-Hill and Dr. James Simpson in 1870 revealed that in six thousand cases of major surgical operations in Parisian hospitals, the mortality rate was approximately 60 percent; conversely, London hospitals with more than three hundred beds never experienced mortality rates higher than 40 percent. Taithe contends, “It is still striking how far public health remained limited to the appearance [emphasis original] of cleanliness and order, and how hygiene had much more credence as a moral and policing concept than as a clinical one.”

France also suffered from an insufficient number of doctors and overstressed hospital facilities. Allan Mitchell explains that France “never had remotely enough qualified physicians to meet the medical needs of its entire population.” While rich citizens received adequate treatment in Paris, other city dwellers and the nation’s rural inhabitants were often neglected. Mitchell concludes, “What perpetually characterized the French medical profession was maldistribution of doctors, inadequacy of facilities, and lack of funds for expansion.”

Overcrowding in Parisian hospitals was another problem. The number of beds in the city’s hospitals failed to increase along with Paris’ population between 1859 and 1879, as these hospitals contained one bed for every 164 patients in 1859 and one bed for every 231 patients in 1879. As Mitchell suggests, “Given its antiquated hospital facilities and outdated health regulations, the Third Republic inherited more medical problems than it could manage.”

Like France’s civilian hospitals, the French army medical corps, the Service de santé, experienced hygienic deficiencies in the second half of the nineteenth century. Branch describes the Second Empire as “a period of general improvement in the interior atmosphere of hospitals in

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91 Taithe, Defeated Flesh, 59; Taithe uses Berkeley-Hill’s Treatment of the Sick and Wounded: Illustrated by Observations Made at the Seat of War for these statistics.
92 Taithe, Defeated Flesh, 61-62.
94 Mitchell, The Divided Path, 119.
95 Mitchell, The Divided Path, 120.
96 Mitchell, The Divided Path, 132.
France” but, importantly, adds, “As in so many other areas, what was recognized in principle was not adopted into practice by the French military in the years before 1870.”  

Pointing to France’s midcentury prominence as a center of medical training and research, Branch indicates that French soldiers benefited little from this distinction in the 1850s. For example, before 1870 “the statistics of French army surgeons were very poor in comparison to those of the English (60% mortality for major operations on the thigh versus 25% [for the English]).”

The French army’s failure to organize a reliable aid service prior to the Franco-Prussian War exacerbated the sanitary deficiencies in France’s hospitals and contributed significantly to the nation’s poor medical performance during this conflict. This failure consisted of several elements: a shortage of medical personnel; an ineffective relationship between the Service de santé and the Intendance, an organization whose responsibilities included supervising military hospitals and the medical corps and supplying the army with transport, food, clothing, and pay; and an ill-prepared ambulance service. Although aware of some of these deficiencies within the army medical service, French military leaders neglected these defects before 1870.

The Service de santé lacked a sufficient number of military doctors prior to the Franco-Prussian War. Despite the 1856 opening of the army medical school in Strasbourg, the French military still did not possess enough physicians to meet even its peacetime demands. At the start of the conflict in 1870, the Service de santé counted 104 career doctors and 62 third- or

98 Branch, 145.
100 Thomas J. Adriance, The Last Gaiter Button: A Study of the Mobilization and Concentration of the French Army in the War of 1870, Contributions in Military Studies (New York: Greenwood Press, 1987), 86; Richard Holmes elaborates on the role of the Intendance: “The functionaries of the Intendance operated as the direct delegates of the Minister of War, and were independent of the normal military chain of command in peacetime. They came under military command in wartime, but the regulations which governed the transition from peace to war were notoriously imprecise;” The Road to Sedan: The French Army 1866-1870 (London: Royal Historical Society; Atlantic Highlands, N.J.: Humanities Press, 1984), 74.
101 Fermer, 47.
fourth-year medical students at this medical institution.\textsuperscript{102} These numbers were, in Guivarc’h’s opinion, “Very insufficient for a large influx of wounded.”\textsuperscript{103}

At the time of the Franco-Prussian War, the number of French doctors appeared strikingly deficient in comparison to the number of physicians in the German armies. The German forces employed approximately 1 doctor for every 290 men, and the French, estimating a ratio of 1 doctor for every 580 soldiers, mustered an actual figure of 1 physician for every 740 men.\textsuperscript{104} The 996 physicians in the Service de santé in 1870 seems an especially low figure when compared to the 1,953 doctors who accompanied the Prussian army during the 1866 Austro-Prussian War.\textsuperscript{105}

Poor wages and a lack of authority help to explain this shortage of military doctors. McAllister explains: “Because they were considered non-combatants, military physicians were not afforded many of the little courtesies usually afforded to officers, such as military salutes, bearing of arms, and the like. The notoriously low pay was little recompense for the years of study and the daily diet of indignities that medical officers had to endure.”\textsuperscript{106} In the early 1850s the French army attempted to alleviate some of the physicians’ grievances by establishing equality between military ranks and medical ranks, but “even with an equivalent rank to that of a captain, a medical man could not give orders or be obeyed by a private.”\textsuperscript{107} Dangerous working conditions also decreased the appeal of serving as a military doctor.\textsuperscript{108}

\begin{thebibliography}{99}
\bibitem{Guivarc’h2} Guivarc’h, “Les ambulances civiles,” 331.
\bibitem{Branch} Branch, 157.
\bibitem{McAllister2} McAllister, 96; Taithe suggests that military doctors’ pay was so low that they “could not capitalize enough to be able to settle in a decent private practice on their retirement,” \emph{Defeated Flesh}, 75.
\bibitem{Taithe} Taithe, \emph{Defeated Flesh}, 76.
\bibitem{Taithe2} Taithe, \emph{Defeated Flesh}, 75.
\end{thebibliography}
The French army’s shortage of medical personnel was not limited to doctors, as the military lacked a sufficient number of pharmacists and nurses in 1870. Dr. Thomas Evans believed that the fact that there was an inadequate number of medical staff contributed to the French army medical corps’ inability to provide aid to the wounded. Blonay indicates that each Prussian army corps, a corps numbering about thirty thousand troops, contained 363 male nurses or *infirmiers*; in contrast, each corps in the French army counted 98 male nurses.

The ineffective relationship between the *Service de santé* and the *Intendance* played a part in France’s poor medical performance during the Franco-Prussian War and the siege of Paris. The *Intendance* directly influenced the workings of the *Service de santé*, authorizing expenditures made by doctors and pharmacists. On the battlefield the *Intendance* oversaw the placement of ambulances, which was a complicated undertaking. McAllister provides an illustration of this task:

> During maneuvers or campaign, if, for example, a medical officer wanted to erect a field hospital in a certain location, he could only recommend this course of action to the commanding officer of the unit. If the commander agreed, he would then issue the necessary orders and deliver them to both the *Intendance* and his field commanders to execute, because the men required for field hospital operations were under a variety of different commands.

Considering the supervisory role of the *Intendance* and the subordinate position of the *Service de santé*, Dr. Charles Gordon characterized the relationship between the two services as one in which “conflict and antagonism naturally take place.” The military medical service’s subordination to the *Intendance* was also problematic because this arrangement granted the

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109 Adriance, 90.
111 Blonay, 66. Although the French provided regulations outlining the proper ratio of *infirmiers* to patients, the low status of these male nurses seemed to negatively affect their employment; *infirmiers* in French hospitals, civilian and military, “By no means enjoy a high personal reputation,” Charles Alexander Gordon, *Lessons on Hygiene and Surgery from the Franco-Prussian War* (London: Baillière, Tindall, and Cox, 1873), 33.
112 McAllister, 94.
113 McAllister, 96.
114 Gordon, 20.
nonmedical *Intendance* full-authority over medical matters. As Jack D. Ellis explains, “Nonmedical comptrollers, preoccupied with financial and administrative details, routinely handed down orders regulating details of camp sanitation, hospital wards, transport, and ambulance services.”\(^{115}\)

Witnesses, especially those with backgrounds in medicine, disapproved of the structure of the *Intendance*. Not leaving his opinion of the *Intendance* open to question, Gordon described this organization: “It is not in any way going beyond actual fact to state that, were the object of existing regulations in the French army to reduce to a minimum the benefits…an efficient medical department might be capable of conferring, it would be difficult to devise a system more calculated to ensure such an end.”\(^{116}\) Dr. Edward Crane of the American Ambulance wrote at length about the ineptitude of the *Service de santé* that resulted from its subordination to the *Intendance*. Due to the *Intendance*’s “autocratic assumptions” and “despotic restrictions,” the military medical department had “neither the ability nor the courage to assume to provide for the multitude of sick and wounded, which it was certain would have to be taken care of during the campaign.”\(^{117}\)

Despite the shortcomings highlighted by the comments of observers, the *Intendance* was not alone responsible for the failures of the French army medical service in 1870. Much like the *Service de santé*, the *Intendance* lacked the resources for effective wartime service. “Remarkably unsuited to the duties it was asked to carry out in 1870,” the *Intendance* faced shortages of personnel and a deficient organization.\(^{118}\) Similarly, Michael Howard asserts that

\(^{115}\) Ellis, 200.
\(^{116}\) Gordon, 20.
\(^{118}\) Adriance, 86.
the Intendance was “overwhelmed by a task far above its strength.”

Furthermore, French military leaders approached the Franco-Prussian War without an organized strategy, thus compounding the disorder of the country’s war preparations. Already stressed from a lack of resources, the Intendance “was brought to the verge of collapse by the hesitations of the high command.”

The French army medical corps’ reliance on an inadequate supervising body diminished the chances for an efficient rapport between the two services. Likewise, the deficiencies in each of these organizations negatively influenced the French army’s ability to provide aid to its soldiers in 1870. The fighting divisions were without suitable ambulance facilities well after the French declared war in July 1870. Some French army units lacked ambulances as late as the Battle of Sedan on 1 September 1870. One writer defined the French army medical service during the Franco-Prussian War as “the most complete triumph of anarchy.” Summing up the performance of the Service de santé, Richard Holmes characterizes the French wartime experience as an “almost total collapse of the medical services.”

Leading up to the Franco-Prussian War, the French army lacked an efficient ambulance service to provide timely succor to the army’s wounded. Crane noted the “absolute poverty of the regular service de santé [sic], when in the field, with regard to the material means for hospitalizing the sick.” Additionally, in a 19 July 1870 letter to the former president of the

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121 Holmes, 86.
122 Howard, 70.
123 Adriance, 90.
125 Holmes, 78.
126 Evans, American Ambulance, 166.
United States Sanitary Commission, Crane predicted that the French army medical corps would not have enough resources to aid the wounded.\textsuperscript{127} This was surprising in view of the fact that the French pioneered the ambulance system and the use of ambulance wagons. Dominique Jean Larrey, a prominent surgeon in Napoleon’s army, introduced the “flying ambulance,” or \textit{ambulance volante}, in 1792.\textsuperscript{128} These wagons were “light, two-horse, two-wheeled, well-sprung vehicles—which enabled the wounded to be whisked from the thick of the fighting rather than bleeding in agony until it was over.”\textsuperscript{129}

The \textit{Service de santé} was in need of stretcher-bearers and efficient ambulance wagons. Referring to the French army’s ambulance service at the time of the Franco-Prussian War, one scholar indicates that “there were no stretcher bearers \textit{sic} whatsoever to carry the wounded off the field.”\textsuperscript{130} As the French military remained without permanent stretcher-carriers in 1870, the \textit{Service de santé} depended on nonmedical personnel—often infantrymen, regimental bandsmen, or mule drivers—for this task.\textsuperscript{131} To some observers the French ambulance wagons appeared unsuited for battlefield conditions. Evans included the French models in his 1868 condemnation of European ambulance wagons as being poorly ventilated and “without exception unnecessarily heavy and clumsy.”\textsuperscript{132} William MacCormac, a surgeon in the Anglo-American ambulance, echoed this assessment during the Franco-Prussian War. MacCormac reported that the French

\begin{flushright}
\textsuperscript{127} Evans, \textit{American Ambulance}, 8.  \\
\textsuperscript{128} Wangensteen and Wangensteen, 501.  \\
\textsuperscript{129} Porter, 362.  \\
\textsuperscript{130} Adriance, 90.  \\
\textsuperscript{131} McAllister, 95; Fermer, 47.  \\
\end{flushright}
ambulance wagons “would often stick fast in some country by-road, or in a field, and then they would have to be abandoned.”

In 1870 the equipment of Service de santé was “both archaic and in short supply.” As France mobilized for war in July, the French army faced a general deficiency of transportation supplies. “Horses and every sort of transport were short,” Howard explains, “Many vehicles, when they were brought out of store, were found to be unusable, and corps commanders had to obtain what they could by local purchase.” While available ambulance wagons were deemed impractical, the French did not designate a specific vehicle to ferry the wounded from the battlefield. The result was that during the Franco-Prussian War, French ambulances relied on a “hopeless variety of farm carts, omnibuses, hackney cabs and other rolling stock” to serve as ambulance wagons.

As George Halstead Boyland’s experience shows, these makeshift vehicles often worsened soldiers’ injuries. Boyland, an assistant surgeon-major in a French army ambulance, vividly recounted a wounded officer’s traumatic experience in a French ambulance wagon: “A wounded captain, who was borne upon one of these, exclaimed to us, ‘For the love of God, gentlemen, take me down and let me die.’”

Although aware of the army medical service’s deficiencies prior to 1870, French military leaders failed to reform the Service de santé. In 1873 Evans suggested that the French ambulance system, inefficient and unwieldy, “is still, in the main, what it was a hundred and fifty

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134 Branch, 157.
135 Howard, 70.
137 George Halstead Boyland, Six Months under the Red Cross, with the French Army (Cincinnati, Ohio: Robert Clarke, 1873), 46.
years ago.” Although probably an exaggeration, Evans’ comment does have some validity. By the early 1860s the structure of the military medical service remained unchanged. In a discussion of the period between 1850 and 1914 as “the great era of the modernization of military medicine,” McAllister singles out France’s failure to reform before 1870:

In the course of the 1850s and 1860s…the lessons learned from a combination of wars, mobilizations, and political realignments prompted Prussia, Britain, Austria, the United States, and many smaller states to make substantial changes in the operations of their sanitation services. Even though the French were directly involved in many of these same events, they made few substantive revisions in their system. As a result, by the summer of 1870 they had fallen behind all these competitors, and especially the Prussians, in their medical arrangements for the troops.

A comparison of the British and French medical services before and after the Crimean War demonstrates the differing reactions to this conflict with regard to the reform of these organizations. Both France and Britain suffered from deficient medical services during the war. For the French army, the number of doctors was insufficient, and, as Pierre Boissier points out, “However admirable their devotion, a handful of sisters of charity could not take the place of medical orderlies and stretcher-bearers.” While the British medical service was restructured following the Crimean War, France “did not follow this example,” and the French soldiers deployed to Italy in 1859 “were even more neglected than the forces in the Crimea had been.”

Fermer asserts that “many French soldiers would pay a heavy price for the failure to reform the French army medical services after the lessons of the Crimean and Italian Wars.”

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138 Evans, American Ambulance, 17-18. As another observer sarcastically wrote, “The reform was so necessary, so urgent, that it was never effected,” Francisque Sarcey, Paris during the Siege (London: Chapman and Hall, 1871), 214.
139 Branch, 117.
140 McAllister, 93, 98; McAllister explains that this “great era” was a time in which doctors in all armies “faced an uphill battle” to bring about beneficial changes to military medicine, 93.
142 Boissier, 137; Boissier adds that the French “lacked everything, apart from courage and a spirit of sacrifice,” 137.
143 Fermer, 47.
Senior army physician Dr. Jean-Charles Chenu’s 1865 publication about the poor medical statistics of the Crimean War aroused concerns about the condition of military medicine in France.\textsuperscript{144} The Second Empire’s military prowess, however, trumped anxieties about the Service de santé: “Because all European wars had ended in French victory, Chenu’s laborious accounts of the problems of organization and the causes of high mortality rates…failed to impress durably either public opinion or key members of the administration.”\textsuperscript{145} Geoffrey Best expands this point, arguing that France’s military success under the first Napoleon in the early nineteenth century continued to influence opinions of the French military in the 1860s. Best eloquently writes that during the Second Empire, “Enough rays from the Napoleonic sunset remained to put upon France a continued appearance of military mastery.”\textsuperscript{146}

The 1867 Paris Exposition provides an example of France’s neglecting to reorganize the Service de santé. This immense exhibition took place during a period in which French leaders expressed uncertainty about the nation’s military preparedness, particularly in light of Prussia’s victory at Sadowa in 1866 during the Austro-Prussian War.\textsuperscript{147} Napoleon III charged recently appointed Minister of War Adolphe Niel with the task of determining whether any of various military exhibits at the Paris Exposition could be helpful for the French army. The resulting report—compiled primarily by Dr. Léon Legouest—contained a lengthy section on ambulances and medical equipment.\textsuperscript{148} The study’s conclusion did not bode well for those advocating the reform of the French army medical corps: “This document [,] while signaling certain imperfections and while gathering diverse opinions of competent men on controversial points,
ascertains that in France the material state of the hospital services of the Army [*sic*] is, on the whole, very satisfactory.”¹⁴⁹

In retrospect France’s dismissal of the American medical display at the Exposition is especially conspicuous, as this exhibit “only served to heighten existing anxiety about the medical facilities of the French military.”¹⁵⁰ Regarding ambulance wagons, Legouest conceded that the American models were cheaper and more maneuverable than the French versions but unhesitatingly remarked that the American design reflected the American fixation with immediate service rather than durability.¹⁵¹ From a more general perspective, Gordon indicated that even though the French did not have a designated wagon for carrying the wounded and a variety of ambulance wagons were displayed in 1867, the government took “no actual steps…to adopt any of these.”¹⁵²

The French report suggested that the American tent was the only useful item within the American display.¹⁵³ The interest in the American tent, however, was accompanied by skepticism. In a 21 March 1871 letter to a Colonel Moore, Dr. Crane described his participation in the 1867 International Conference in Paris:

I advocated the use—to the largest extent possible—of tents and tent-barracks. I [,] at the same time, explained how [emphasis original], by the introduction of a specific system of heating, tents might be advantageously employed, in temperate climates, not only during the warmer months but during the coldest…an opinion at the time pronounced ‘impossible,’ by the President of the Committee as also as by nearly every one of its members.¹⁵⁴

¹⁵⁰ Branch, 132. Evans funded the display, which consisted of American field-hospital equipment and ambulance wagons, and the American ambulance used many of these exhibit items during the siege in 1870; this is discussed more thoroughly in Chapter 3.
¹⁵¹ Branch, 135.
¹⁵² Gordon, 92.
¹⁵³ Branch, 136.
¹⁵⁴ Edward A. Crane, Paris, to Col. Moore, LS, 21 March 1871, History of Medicine Division, National Library of Medicine, Bethesda, Md.
Any French interest in the American model appeared short-lived, as Crane reported that by 1870, France’s military had not adopted, “In practice or in principle,” a system of temporary tent- or barrack-hospitals. He added that the army administration was “still relying upon the shelter furnished by the ordinary buildings of the country, in the establishment of its temporary hospitals.”

Relating to the French army’s reluctance to reform the Service de santé, the military dismissed the usefulness of voluntary aid societies prior to the Franco-Prussian War. The French Society, also known as the Société de Secours aux Blessés des Armées de Terre et de Mer, was founded in Paris in May 1864 in accordance with the October 1863 proposal for the voluntary formation of national relief societies. Although France established a voluntary aid society at a relatively early date and French delegates signed the 1864 Geneva Convention, the nation did not lend its full support to the concept of a voluntary organization assisting the army medical service. The topic of voluntary aid was hotly debated in France through the 1860s. While Napoleon III and the Empress believed a voluntary aid association would benefit the Service de santé, French generals dismissed this idea and refused to acknowledge that the army medical service was deficient.

French military leaders were reluctant to accept a voluntary aid organization even as Evans advertised the benefits of the United States Sanitary Commission in particular and voluntary societies in general in two publications during the 1860s. The Sanitary Commission,

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155 Evans, American Ambulance, 203; prior to this statement, Crane indicated that Austria, Prussia, and England were beginning to employ such temporary-hospital arrangements, 203.


157 Prior to the 1868 publication of Sanitary Institutions—a text that highlighted the benefits of the cooperation between the Prussian army and the Prussian voluntary aid society—Evans wrote about the U.S. Sanitary Commission in Thomas W. Evans, La Commission sanitaire des États-Unis: son origine, son organisation et ses
created in May 1861 during the American Civil War, was a voluntary citizens’ association that
supplemented the North’s Army Medical Department by addressing, for the most part,
administrative concerns: “How were the huge numbers of new recruits to be inspected,
transported, housed, and fed in safety? How were the throngs of sick and wounded to be
removed from the battlefield, treated, and (when possible) returned to useful service?”
Toward these ends, the Sanitary Commission directed inspections of living quarters and rations, arranged
medical examinations for recruits, managed hospitals, and funded death-registration and burial
services for soldiers. Although Evans’ 1865 publication on this organization received
favorable reviews, the French army medical service reacted to this work with “a mix of hostility,
contempt, and the chilling fear that the authority of the bureaucratic system might be
diminished.” As the Emperor’s aide-de-camp commented in July 1867, “We had in France no
real faith in the efficiency of private societies concurring with the official action of the
department of war.”

Even the French representatives to the October 1863 meeting in Geneva were not
enthusiastic about forming a French aid organization. Hutchinson explains that these delegates
“had made it abundantly clear that they disliked the idea of volunteer auxiliaries, trained or

**résumés, avec une notice sur les hôpitaux militaires aux États-Unis, et sur la réforme sanitaire dans les armées europénnes** (Paris: E. Dentu, 1865). Upon his return to Paris following visits to some military hospitals during
France’s 1859 campaign in Italy, Evans claimed that he took time “to stress the necessity to bring about certain
urgent reforms in the hospital and ambulance services belonging to the armies in the field,” and he believed that his
suggestions “served as the basis to the introduction of important reforms in the French army medical service,” *La
Commission sanitaire*, x; Branch argues that “it is probable…that any reforms inaugurated in the Army’s Service de santé [sic] on the basis of Evans’ report were chiefly of a technical nature,” 117.

158 Bonnie Ellen Blustein, “‘To Increase the Efficiency of the Medical Department’: A New Approach to
159 Branch, 120-121.
160 Gerald Carson, *The Dentist and the Empress: The Adventures of Dr. Tom Evans in Gas-Lit Paris*
(Boston: Houghton Mifflin, 1983), 94.
161 Evans, *Sanitary Institutions*, 189. Favé, the aide-de-campe, added that Evans’ 1868 publication—
originally published in French in 1867—changed his negative opinion of voluntary aid societies, 189; however,
Legouest believed that the French military should retain control of all army medical facilities, determining that “as
ingenious or as fruitful as it might be in its means of assistance, private aid never would be able to give effective
assistance on the battlefield,” Ministère de la Guerre, 83-84; quoted in Branch, 135.
otherwise, so it was unrealistic to expect either of them to take the initiative in organizing a national aid society.”

While one French delegate imagined that mules would be more useful than volunteers because the animals required less food and care, a Dr. Boudier, an experienced military physician sent by Minister of War Jacques Louis Randon, appeared especially skeptical of volunteers’ ability to remain steadfast on the battlefield.

As a result of the French delegates’ uncooperative position, Henri Dunant traveled to Paris in November 1863 to lobby the Emperor for support of a French aid society. On 21 December Napoleon III announced his endorsement of the objectives promulgated in October, indicating to Randon that he wanted the army to cooperate in forming a voluntary aid organization. “Unwilling but overruled,” Randon met with Dunant and discussed the tasks and the structure of a voluntary society. Hutchinson suggests that “this grudging compliance…needs to be kept in mind because it affected relations between the army and what was to become the French national aid society until well into the 1870s.”

As a reflection of the uneasy relationship between these two organizations, the French war ministry essentially disregarded the French Society prior to the Franco-Prussian War, neglecting to familiarize French soldiers with the Geneva Convention’s content and the Red Cross insignia’s meaning.

In an 1872 lecture at the Royal United Service Institution, Sir Thomas Longmore recalled that the French government “had done scarcely anything of practical value in the matter since it had acceded to the Convention. The Articles…had not been made known to the Officers [sic] and

162 Hutchinson, 43.
163 Moorehead, 20-21; Gumpert, 128. These two delegates also represented France at the August 1864 conference, Hutchison, 45. Describing the attempts to gain support for the voluntary aid movement, Gumpert asserts that “the greatest difficulties were in France,” 134.
164 Hutchinson, 43.
165 Hutchinson, 43.
166 Hutchinson, 115.
men of the Army [sic], and...they exhibited an amount of ignorance regarding the Treaty and its objects.\textsuperscript{167}

Analyzing the reasons for France’s poor medical performance during the Franco-Prussian War and the siege of Paris, the French army was not the only organization that fell short in preparing a reliable aid service. Subsequent to its 1864 formation, the French Society itself took few steps to prepare for a future conflict. The blame for the group’s ineptitude at the start of the war, therefore, should not be ascribed solely to the military’s unreceptive attitude to voluntary aid. The French Red Cross’ administration was, in Martin Gumpert’s opinion, “A monstrosity of names and offices—honorary presidents, a dozen vice-presidents, a half dozen secretaries, charter members, and subcommittees.”\textsuperscript{168} Moreover, the Society’s aristocratic leaders made “no serious effort...to procure supplies, establish relations with the army or the medical profession, or train nurses and ambulance personnel.”\textsuperscript{169} Historians characterize this organization during the prewar period as “little more than a salon affair, more concerned with...fund-raising events than with serious preparation for war” and as “a rather informal club of medical men...and benevolent aristocrats.”\textsuperscript{170} After observing the first use of the Red Cross emblem in the summer of 1864 during the Schleswig War, Dr. Louis Appia, one of the individuals with whom Moynier originally collaborated, outlined what he considered to be the necessary preparations for voluntary aid societies. The French Society’s activities before 1870 essentially countered all of Appia’s conclusions:

\textsuperscript{167} Thomas Longmore, “On the Geneva Convention of 1864, in Relation to the Aid Afforded by Volunteer Societies to Sick and Wounded Soldiers during the Late Franco-German War, with a Glance at the Proper Functions of National Aid-Societies, Particularly the British Aid-Society, in the Future” (lecture delivered at the Royal United Service Institution, 12 April 1872), History of Medicine Division, National Library of Medicine, Bethesda, Md., 9.
\textsuperscript{168} Gumpert, 141; Gumpert cleverly adds to this assessment: “What a wonderful opportunity to satisfy and injure vanities!,” 141.
\textsuperscript{169} Hutchinson, 109.
\textsuperscript{170} Fermer, 48; Taithe, Defeated Flesh, 165.
The first and most obvious [of these conclusions] was that aid committees should collect as much money as possible in advance of any conflict, so that they could begin their work with a well-stocked treasury. The second was that they should prepare in advance a sort of “battle plan,” so that they would know what goods were available and their price as well as the probable cost of transporting goods to wherever they were likely to be needed. The third lesson...was that committees should appreciate that they would need to send to the front delegates...who would be responsible for organizing the distribution of supplies and for preventing abuses.¹⁷¹

The French Society’s lack of preparation was glaringly obvious to contemporary observers. The Society’s executive council selected Professor Léon Le Fort, France’s expert in military surgery, for the position of managing the volunteer ambulances in 1870.¹⁷² Discussing his appointment, Le Fort remarked, “When in July 1870 I took on the organization of the volunteer ambulances, I was astonished, despite my already unfavorable expectations, to find neither material, nor medical personnel, nor plan of organization, nor money; for it appeared that there were only a few hundred francs in the treasury.”¹⁷³ Le Fort was not alone in his criticisms, as even adamant supporters of the Red Cross organizations voiced their concerns at the French Society’s laxity in preparation. For instance, Gustave Moynier, who played an instrumental role in the Red Cross’ history, commented on the French Society: “Although it was founded in 1864, it possessed neither personnel, material, or money [in 1870]. The Central Committee of Paris was obliged to improvise everything.”¹⁷⁴ As a final example, Longmore noted that “No regulations had been prepared for incorporating the volunteer with the official Army [sic] medical service when the war commenced, and, as an inevitable consequence, all was uncertainty and bewilderment in this direction at starting.”¹⁷⁵

¹⁷¹ Hutchinson, 64.
¹⁷² The choice of Le Fort was surprising: Hutchinson indicates that Le Fort was “a vocal critic” of voluntary aid and of the French Society, 110.
¹⁷³ Léon Le Fort, La chirurgie militaire et les sociétés de secours en France à l’étranger (Paris: Germer Bailliére, 1872), 234; quoted in Hutchinson, 110.
¹⁷⁵ Longmore, 9.
This analysis of different areas of France’s pre-1870 medical system has drawn attention to the inadequate sanitation in civilian and military hospitals and to the deficiencies in personnel, organization, and resources of both the army medical corps and the Red Cross society. Despite opportunities for sanitary reform, the Service de santé remained poorly equipped and subordinate to the Intendance before the Franco-Prussian War. Formed in the mid-1860s, the French Society took no practical steps toward becoming a functioning aid organization prior to the conflict. France’s failure to develop a reliable civilian or military aid-service proved disastrous for the wounded during the Franco-Prussian War and the siege of Paris.
CHAPTER 2- MEDICAL DISORDER AND THE SANITARY DISASTER IN BESIEGED PARIS

Thrust into war in July 1870, both the Service de santé and the French Society—each short-supplied and in disarray—contributed significantly to France’s poor medical performance during the Franco-Prussian War and the siege of Paris. To show the extent of this sanitary disaster and to establish the setting in which the American ambulance labored, this chapter will analyze this medical debacle, with an emphasis on the siege of Paris. This examination will consider the following components: the disorder within French-sponsored ambulances and hospitals; civilian misuse of both the Red Cross symbol and medical-volunteer status; and the unsanitary conditions within many Parisian medical facilities.

Several discussions will precede this analysis and will draw attention to the ways in which the war and the siege magnified the deficiencies of the Service de santé and the French Society. Investigations of the French Red Cross’ haphazard attempts to outfit ambulances at the start of the conflict and of the consequences of the Second Empire’s military defeats and early-September collapse for the army medical service are followed by overviews of the food and fuel deficiencies in Paris and of the deteriorating weather and sanitary conditions as the siege persisted. An examination of the proliferation of temporary hospitals within the city prior to the Prussian encirclement in mid-September introduces the French government’s efforts in late 1870 to coordinate the city’s medical facilities. “As the number of casualties expanded,” Rupert Christiansen explains, “The extent of medical disorganization and incompetence became alarmingly apparent.”

This chapter relies on a number of primary sources, French and foreign, documenting experiences from both the Franco-Prussian War and the siege of Paris. Joy Harvey’s comments

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relate to the value of foreigners’ remarks about the medical aspects of the events of 1870 and 1871: “The medical system of the past, like a remote tribe, is best presented through the words of a ‘participant observer,’...an eyewitness who functions as a member of that tribe but who can explain it to outsiders. It is considered ideal if this observer...comes from a different culture than the one observed so that seemingly obvious performances and beliefs are noted.”

Similarly, Melvin Kranzberg suggests that neutral observers’ reports “check the extreme views of the partisans.”

The French Society’s failure to establish a working organization prior to 1870 hindered this group as its leaders scrambled to outfit ambulances and gather funds and medical supplies after France declared war on Prussia in July 1870. Gustave Moynier’s extensive description of the impediments to the French Society’s efficient functioning in 1870 demonstrates the negative effects of the nation’s failure to organize its voluntary aid society. According to Moynier,

The inability of the Government [sic] to support the Aid Committees [across France], the rupture of communication with the Central Committee, the absence of an understanding with the military authorities, the ignorance of people with regard to the Red Cross, and the terrible disasters which followed so rapidly one upon the other causing confusion in every administrative office as well as in the minds of all men, formed a combination of sad circumstances which...affords a reason for many defects.

Indeed, some of Moynier’s points pertained to the difficult circumstances of the Franco-Prussian War, but the French Red Cross, beginning the war without funds or a working infrastructure, lacked the ability to cope with wartime contingencies. As a result, the French Society hurriedly

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formed ambulances staffed by well-intentioned—but unprepared—medical personnel. Dr. Edward Crane claimed that the French Society “possessed no special qualifications for the direction of the ambulance service of the army,” adding with a certain caustic originality that this organization “was sleeping in a cataleptic repose when the declaration of war...like a sudden peal of thunder, startled all France.”

With Léon Le Fort outfitting the French Society’s ambulances as quickly as possible, Auguste Nélaton, head of a newly formed medical committee within the Society, directed the volunteer ambulances as they moved out of Paris toward the battlefields. The French Society dispatched sixteen ambulances to Borny, Toul, Verdun, Beaumont, Attigny, Sedan, Montmédy, Mouzon, and Metz. Despite the effectiveness of Le Fort’s and Nélaton’s leadership, the aristocratic leaders of the French Society’s executive council believed that these “hastily organized but thoroughly professional arrangements” permitted them no role in the functioning of this aid service. The executive council consequently relieved Nélaton of his position and dissolved the medical committee on 8 August, only three days after Le Fort departed Paris with the first Red Cross ambulance, and Comte de Flavigny, the president of the French Society,

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181 Thomas W. Evans, *History of the American Ambulance Established in Paris during the Siege of 1870-71, Together with the Details of Its Methods and Its Works* (London: Sampson Low, Marston, Low, and Searle: 1873), 167; in this diatribe, Crane also noted that the French Society’s executive council “had no experience of any kind, had projected no plans, and for the simple reason that it had no clear ideas of its own mission,” 168.
182 Auguste Cochin, *Le service de santé des Armées avant et pendant le siège de Paris* (Paris: A. Sauton, 1871), 41; French physicians directed twelve of these ambulances, and the remaining four were categorized as follows: one Swiss ambulance, one Anglo-American ambulance, one Dutch ambulance, and one Italian ambulance, Marie Raoul Brice and Maurice Bottet, *Le corps de santé militaire en France: son évolution, ses campagnes, 1708-1882* (Paris: Berger-Levrault, 1907), 393.
assumed control over the supervision of the ambulances. The council appointed Dr. Chenu, ailing and in his sixties, as the director of the group’s medical services.

Assembling a volunteer ambulance proved a complex process, and, according to William MacCormac, the French Society organized “monstrously cumbrous” ambulances that contained “too many surgeons, too much material to transport and too many infirmiers [male nurses].” Although the structure varied, a volunteer ambulance ideally consisted of approximately eighty individuals: a surgeon-in-chief, four surgeon-majors, sixteen surgeon-aides, one or two chaplains, three accountants, two engineers, and fifty-two male nurses and coachmen. Demonstrating the haphazardness of the French Society’s process for outfitting ambulances, Crane counted over one hundred personnel for one ambulance and noted that the ambulances “seem never to have been constructed upon any well-defined basis.”

While the number of personnel varied drastically between ambulances, the executive council’s members equipped the temporary hospitals “as if they were moving from their town houses to their country estates.” These ambulances often carried an assortment of lavish supplies but few practical medical items. For example, the Society’s fifth ambulance possessed “copious cucumber pomade but little chloroform, and its surgeons had to beg a carpentry saw to

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184 Hutchinson, 111-112.
185 Hutchinson, 112.
186 William MacCormac, Notes and Recollections of an Ambulance Surgeon, Being an Account of Work Done under the Red Cross during the Campaign of 1870 (London: Churchill, 1871), 26; in his report to the British aid society, Lieutenant-Colonel R. Loyd-Lindsay also indicated that the French ambulances were overstuffed, National Aid Society, Report of the Operations of the British National Society for Aid to the Sick and Wounded in War during the Franco-German War, 1870-1871, Together with a Statement of Receipts and Expenditure and Maps, Reports, and Correspondence (London: Harrison and Sons, 1871), 21.
187 Brice and Bottet, 393.
188 Evans, American Ambulance, 148-149, n.1.
189 Hutchinson, 114.
perform amputations."\textsuperscript{190} As Crane observed, the French Society was “almost constantly ignorant of the necessities of the several armies in the field.”\textsuperscript{191}

Although patriotic and enthusiastic about the possibilities of wartime voluntary aid, the aristocrats were neither serving military men nor medically qualified. Hutchinson remarks,

It soon became apparent…that enthusiasm and an air of authority were no substitute for a plan of organization. The aristocrats seemed to think that any medical man of good family and social position could run an ambulance….Ordinary physicians with little or no experience of gunshot wounds…were now put in charge of ambulances.\textsuperscript{192}

Hutchinson validly asserts that a fundamental defect of the French Society in 1870 was the need to improvise. He also doubts that the Society’s medical committee, composed of experienced medical professionals, could have managed the organization of the volunteer ambulances, noting that the committee “might have improvised better, but it would still have been improvising.”\textsuperscript{193}

The rapid developments relating to the downfall of the Second Empire and the establishment of the Third Republic affected the performance of the French medical services during the siege, especially the Service de santé. In the span of only a few weeks from the beginning of September until the Prussian encirclement, the new French leaders worked feverishly to reorganize the government. Taithe states that the Franco-Prussian War occurred during “a crucial stage in the redevelopment of both the French army strategies and medical practices. With the failings of the imperial army, the military Service de Santé [sic] had to

\textsuperscript{190} Douglas Fermer, Sedan 1870: The Eclipse of France (Barnsley: Pen and Sword Military, 2008), 181; this ambulance also provides an example of the careless distribution of personnel: with only three vehicles to transport the wounded, the fifth ambulance was staffed by 164 medical workers, Hutchinson, 112.

\textsuperscript{191} Evans, American Ambulance, 168.

\textsuperscript{192} Hutchinson, 112.

\textsuperscript{193} Hutchinson, 112. Caroline Moorehead presents a more positive description of the French Society’s preparations, emphasizing the “energetic and competent” figure of Comte de Flavigny and his spirited fundraising efforts, Dunant’s Dream: War, Switzerland and the History of the Red Cross (New York: Carroll and Graf Publishers, 1999), 67.
integrate new political priorities.” Additionally, the French surrender at Sedan worsened the staff shortage within the *Service de santé*. As the Prussians took French ambulance workers prisoner at Sedan—and during the sieges of Metz and of Strasbourg—the number of army medical personnel in Paris was “altogether insufficient.” In an inquiry concerning the activity of the British aid society during the Franco-Prussian War, the panel asked the question, “Was the number of surgeons in the service of the belligerents in any sense sufficient to attend and care for the sick and wounded after the principal battles in the war?” A sample of the responses illustrates the lack of medical personnel in the *Service de santé*: Colonel Nicholas Elphinstone asserted that “there was a lamentable deficiency of surgeons on the French side”; Colonel John William Cox indicated that “the military surgeons were quite insufficient in number, so far as the French were concerned”; and Dr. John Murray reported that the number of medical personnel was “utterly insufficient in the French army; much less so in the German.”

Like the French Society, the army medical corps’ failure to establish a reliable aid service prior to the Franco-Prussian War hindered the service’s ability to function during the war. As Comte d’Hérisson wrote, “The first condition of war is order, and whatever is not foreseen is disorder.” The deficiencies within the French medical services appeared “almost immediately” after the outbreak of the Franco-Prussian War:

Many regiments did not dispose of the required number of medical officers. Few in the army knew anything about the Geneva Convention and were either ready or willing to abide by its terms. All the defeats turned into substantial sanitary disasters, especially in

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196 National Aid Society, *Questions on the Operations of the British National Society for Aid to the Sick and Wounded in War, and Replies Thereto by Various Members of the Society’s Staff and Others; Being the Results of Their Experiences in the Franco-German War, 1870-71*, enl. ed. (London: Harrison and Sons, 1872), 46-47.
Sedan, while the large number of besieged fortresses and cities soon presented new problems. Largest among all of them was Paris.\textsuperscript{198}

The siege of Paris was an especially revealing demonstration of the flaws within the Service de santé.\textsuperscript{199}

A final point to consider when analyzing the French medical performance within besieged Paris is the deteriorating physical environment in the city as the siege progressed. For instance, Parisians faced shortages of food and fuel during the siege due to the French government’s miscalculations. The provisioning of Paris was underway before the Second Empire collapsed in early September. At this point, the city’s stores of flour and corn were expected to last for eighty days, and forty thousand oxen and a quarter of a million sheep roamed in the Bois de Boulogne.\textsuperscript{200} While the sight of these stockpiles relieved citizens’ anxieties, the French government never prepared a detailed, accurate statement of the actual amount of food in the city.\textsuperscript{201} Moreover, the government did not attempt to calculate the city’s population to ensure proper provisioning until December, a neglect that was, in Kranzberg’s opinion, “One of the glaring weaknesses in the whole conduct of the siege.”\textsuperscript{202} The French possessed statistics from the 1866 census, but the war fostered a large number of migrations into and out of Paris, which rendered the census worthless. “Without any statistical bases for consumption,” Kranzberg explains, “The government easily fell into a miscalculation of its resources.”\textsuperscript{203} Examining the effects of the French government’s failures to accurately assess Paris’ food supply and population, D.W. Brogan frankly points out, “It was, of course, impossible to determine how

\textsuperscript{198} Taithe, Defeated Flesh, 79.
\textsuperscript{199} Gordon contended that the siege exposed “many of the imperfections of the present status of the French medical officers,” 22.
\textsuperscript{202} Brogan, 37; Kranzberg, 42.
\textsuperscript{203} Kranzberg, 42.
long an unknown number of inhabitants could be fed on an unknown quantity of wheat, meat, and other foodstuffs.”

The French government also did not prepare enough fuel supplies, which proved especially problematic during the winter months of the siege. On 22 August the Parisian gas companies estimated that the city contained enough coal for seventy-eight days, and this assessment seemed reasonable because few imagined that the siege would last longer than a few months. The unusually cold weather in the winter of 1870 and 1871 aggravated the shortages of wood, coal, and gas: “Rarely if ever before had the Parisians had to face such severe weather, and never with such limited means at their disposal to combat its rigors.” Claiming that “such a winter had not been known for twenty years,” one Parisian eyewitness stated that “the question of fuel was also one of the cruel ones which were so rife and so difficult of solution in the month of December.”

The fuel and food scarcities affected many of the city’s ambulances and hospitals, as these medical facilities experienced increasing mortality rates as the siege persisted and the temperature dropped. Crane noted that “the increase in the death-rates as the siege continued is strikingly evident in the returns of nearly every ambulance.” According to Francisque Sarcey, the number of deaths per week in Paris rose steadily from around 1,250 during the first week of the siege to 4,500 the final week.

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204 Brogan, 37.
205 Howard, 320. As Howard indicates, “It was generally presumed that the Germans would attack. The city would be able to repel their attacks, inflicting huge casualties, for about a month; and by then a relief army would have been raised in the provinces…to fall on the rear of the enemy and complete its rout,” 320.
206 Kranzberg, 122; inside Paris the average temperatures during the day in December 1870 and January 1871 were below freezing, Taithe, Defeated Flesh, 58.
207 Francisque Sarcey, Paris during the Siege (London: Chapman and Hall, 1871), 193, 203.
208 Evans, American Ambulance, 482, n. 1.
209 Sarcey, 202. Sarcey’s calculation was probably too low; in a 25 January 1871 dispatch to Secretary of State Hamilton Fish, Elihu Washburne described the increasing number of deaths in Paris: “Last week the number reached four thousand four hundred and sixty-five (4,465) not counting the deaths in the hospitals, which are
Sanitary conditions in Paris also deteriorated as the siege progressed. “Paris was becoming filthy,” Christiansen explains, “Huge piles of ordure and garbage accumulated and festered in each arrondissement, the out-of-city dumps being inaccessible. There was also a decline in the quality of the water supply (following the severing of the aqueducts which brought in fresh flows from the hills, and some inefficient filtering of the Seine).” The increasingly unsanitary environment, which helped to spread disease, also contributed to the heightened morality rates during the siege.

The large number of hospitals and ambulances in besieged Paris magnified the inadequate preparations made by the French Society and the French army medical corps. Alistair Horne contends that “the proliferation of ambulances of various kinds led to bitter internecine squabbles…which in turn led, on the battlefield, to appalling chaos.” As the Prussian forces moved closer to Paris in the second half of September, the city was preparing for the impending siege. In addition to the city’s existing hospitals, Parisians and Red Cross volunteers transformed assorted buildings into ambulances. “Hospitals were to be found everywhere—in hotels, department stores, theaters, and public buildings,” Kranzberg asserts, “The flag of the Red Cross waved from such varied buildings as the Odéon, Comédie-Française, Variétés, Lyrique, Port St. Martin, Cluny, and Belleville theaters, and from the Tuileries,

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210 Christiansen, 190. Paris’ German population usually collected the city’s garbage, but most of the Germans fled, or were forced out of Paris, before the siege began, Moorehead, 78.
211 In a discussion of diseases observed during the siege, Dr. Amédée Tardieu included smallpox, typhoid fever, dysentery, cholera, bronchitis, pneumonia, and typhus, Amédée Tardieu, 8me [sic] ambulance de campagne de la Société de secours aux blessés (campagnes de Sedan et de Paris) août 1870-février 1871; rapport historique, médical et administratif (Paris: Adrien Delahaye, 1872), 76-78.
Luxembourg, Elysées, Palais Royale, Corps Législatif, Palais de Justice, and the Café de la Cascade.”

This list demonstrates the visual prominence of medical facilities during the siege of Paris, helping to account for the numerous references to ambulances and hospitals in the contemporary reports from within the besieged city. Indeed, “The service of hospitals and ambulances, whether natives or foreigners, was one of the most prominent aspects of military activity during the siege.”

A multitude of ambulances labored in and around Paris during the siege. Some ambulances formed early in the Franco-Prussian War, while others, such as the American ambulance, worked exclusively during the siege. From August 1870 the French Society financed 217 ambulances, containing a total of 3,610 beds, and the Comité de la presse, a competing aid society organized by a group of French newspapers, opened 8 temporary hospitals with a total of 600 beds. Pointing out that these figures “represented but a fraction of the civilian medical war effort,” Taithe indicates that other individuals and groups formed another 1,291 ambulances in Paris, bringing the total number of beds in the city to 25,182.

Alternatively, General Auguste-Alexandre Ducrot estimated that Paris contained approximately 6,000 beds in early September, a number that increased to 13,000 by the start of the siege and eventually rose to 37,000 by the beginning of December 1870.

Taithe explains this proliferation of ambulances: “The flag bearing a red cross validated the independent existence of hundreds of ambulances supported by religious orders, municipal

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213 Kranzberg, 24.
214 Kranzberg, 67.
215 Cochin, 41-42; from the beginning of the siege until 10 October, these ambulances “spent 2,568,254 francs, distributed more than 72,000 kilograms of linen, 10,000 sheets, 104,000 liters of wine,” Cochin, 41.
216 Taithe, Defeated Flesh, 170-171.
217 Auguste-Alexandre Ducrot, La défense de Paris (1870-1871), 2d ed. (Paris: E. Dentu, 1877-1878), 1:174-176; Ducrot suggested that the 37,000 beds were divided among the different aid providers as follows: 9,500 for the military hospitals, 3,000 for the Assistance publique, 2,000 combined for the French Society and the Comité de la presse, 2,000 for the municipal ambulances, 4,000 for religious organizations, and 16,500 for private ambulances “of all capacity and all origin,” 1:176.
authorities, companies, rich philanthropists…, Jewish, Protestant…and Freemasons’
or even individuals.”

In his survey of the various temporary hospitals in Paris during the siege, Alexandre Piedagnel discussed thirty-three ambulances, and these facilities often differed in the number of personnel and beds. For example, his list of private ambulances included small facilities such as the ten-patient ambulance run by a Dr. Blanche and a Dr. Guérin to larger ambulances like the Kleins’ hospital on the Rue Nicolo, with the capacity for twenty-three patients.

The different ambulances in besieged Paris can be roughly grouped into three categories: military ambulances, “sadly inadequate and inefficient” in Kranzberg’s assessment; Red Cross ambulances, French and foreign; and independent ambulances organized by individuals or groups. Witnesses in the capital frequently observed the various ambulances exiting the city to scour the environs for wounded. For example, Nathan Sheppard recorded in his 22 December diary entry that before a battle, he passed “a long line of ambulances—the ambulance of the Press, the Italian, the Swiss, the American, the International, and the rest, rolling along toward the field.”

The total number of medical facilities proved unwieldy during the opening month of the siege. Parisians converted all types of buildings into ambulances with a “feverish zeal…without reference to those already organized.” As Guivarc’h notes, “The evacuation of the critically injured quickly posed problems, certain reception sites being unfit to treat the seriously wounded, others receiving secondarily the sick incorrectly operated on.”

In an effort to organize the medical environment in Paris, General Louis Jules Trochu, the governor of the

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218 Taithe, Defeated Flesh, 171.
219 Alexandre Piedagnel, Les ambulances de Paris pendant le siège, 1870-1871, 2d ed. (Paris: Librairie générale, 1871), 17, 12. For a detailed list of the ambulances in each arrondissement, see, Cochin, 67-78.
220 Kranzberg, 67.
222 Evans, American Ambulance, 172.
besieged city, attempted a restructuring and registration scheme for the ambulances in October 1870. On 20 October Trochu instructed Hippolyte Larrey—the Surgeon-in-Chief of the Army of Paris and son of Dominique Jean Larrey—to form a coordinating committee, the Commission supérieure des ambulances, which included representatives from the military, the civilian ambulances, and the Assistance publique. Presided over by Jules Ferry, the commission’s goals included the registration and inspection of the city’s private ambulances and the development of an efficient system of distributing patients among Parisian medical facilities. Toward these ends, on 5 November the commission announced its plan to divide Paris into ten sanitary sectors, each supervised by a medical officer and under the jurisdiction of a primary hospital.

The reorganization plan eventually reduced the number of ambulances within the city. In reference to the common practice of people establishing temporary hospitals in their homes to protect their property, an observer reported on 15 December that the government “has taken severe measures to prevent this abuse.” Following the reorganization, ten main hospitals in Paris supervised a total of 1,319 ambulances containing 22,887 beds. If accurate, this reduced figure seems to represent the lowest possible number of beds in besieged Paris.

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224 Marcel Guivarc’h, “Les ambulances civiles pendant la guerre franco-prussienne (19 juillet 1870-28 janvier 1871),” Histoire des sciences médicales 41, no. 4 (2007): 334; Taithe, Defeated Flesh, 87-88. Describing the Assistance publique as “the powerful central administration of charities and public hospitals in Paris,” Taithe includes this organization in his list of “the many institutions that needed reform urgently” under the Second Empire, Defeated Flesh, 220, 63.

225 Guivarc’h, “Les ambulances civiles,” 334; in Guivarc’h’s opinion, this scheme “appear[ed] quite complex in its debut,” Chirurgie et médecine, 120. According to Cochin, the medical rearrangement only divided Paris into eight sanitary districts, with each district’s having a primary hospital, 67.

226 Piedagnel, 37.

227 Brice and Bottet, 395; according to Chenu, 959 of these were private ambulances and 360 were affiliated with the Red Cross societies, Jean de Blonay, 1870: une révolution chirurgicale: les origines et le développement de la chirurgie civile et militaire moderne (Vevey: Éditions Delta, 1976), 92-93. Gordon calculated a larger number of beds (26,675) and a much smaller number of ambulances (634) but claimed that the actual figure for the number of beds was probably larger than his estimate, 42-43.
Valuable in theory, this plan took shape slowly and was not completely effective, as the interests of the committee’s civilian personnel often clashed with those of the military. Larrey’s desire to implement an administrative structure reminiscent of the military’s hierarchy “was alien and often unappealing to civilian doctors.” According to Taithe, the commission’s configuration “did much to ensure its inefficiency and little to establish its legitimacy,” and, as a result, the first meaningful reform of the city’s medical structure only occurred only in late November 1870. The group introduced a more comprehensive measure in mid-December in which the different ambulances were listed by arrondissement and categorized by size. It was not until 31 December that the commission actualized a reform that institutionalized the Red Cross, aligned the entirety of the civilian aid with the Red Cross, and positioned the army at the head of the Parisian medical structure. To show the extent to which the events of 1870 exacerbated France’s lack of aid preparations, it is worth stressing that French military and civilian medical authorities developed a workable plan for the cooperation of the several aid organizations only after more than three months of siege and five months of war.

The following section will analyze France’s poor medical performance in 1870 and 1871, with an emphasis on the siege of Paris. The elements that will be considered are: the disorganization of the French ambulances and hospitals; the forms of misuse of both the Red Cross emblem and medical-volunteer status; and the unhygienic conditions in many Parisian

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228 Taithe, Defeated Flesh, 80.
229 Taithe, Defeated Flesh, 88; Taithe explains that the 20 November reform “limited itself to tracking down the soldiers/patients and keeping them on the books,” Defeated Flesh, 88.
230 While the largest ambulances could perform major operations, medium-sized facilities were allowed sick and wounded patients, and the smallest ambulances provided aid for minor injuries and ailments, Taithe, Defeated Flesh, 88.
231 Taithe, Defeated Flesh, 88. From Tours, where the French government directed the war outside Paris during the siege, the Minister of War issued a decree similar to this reform on 4 January 1871. Intended to reduce the number of private ambulances working beyond the control of the French military authorities, this announcement placed all volunteer ambulances under the direction of the Red Cross, which in turn was subject to the French army’s jurisdiction, Evans, American Ambulance, 160-161.
medical facilities. This examination will demonstrate that the prewar deficiencies in France’s army medical corps and the French Red Cross contributed significantly to the sanitary disaster on the battlefields and within Paris. As Thomas Gibson Bowles noted, “The ambulances of Paris ought to be as good as anything of the kind that the world can produce, but such is, I am sorry to say, far, far from being the case.”

Contemporary observers attested to the general mismanagement of the French-sponsored ambulances and hospitals. In Bowles’ opinion, the Grand Hôtel was “especially badly managed” due to the “waste of money beyond all computation over its arrangements.” While Sarcey blamed France’s suffering during the siege on the “want of forethought and disorder in the governing bodies, from the top of the ladder down to the very last rung,” Crane, discussing the uncoordinated efforts of France’s aid services, determined that “a more chaotic and wretched state of things could scarcely be imagined.”

Reflecting this mismanagement in Paris, witnesses pointed out the glut of personnel in certain ambulances and hospitals. Felix Whitehurst attributed the disorder in Paris to the existence of too many ambulances and volunteer medical personnel, and on 21 October John Augustus O’Shea wrote, “The conviction had been growing upon me that there was mismanagement in the French arrangements for the aid of the victims of war.” As a testament to the disorganization of the French Society, Henry Du Pré Labouchère asserted that the Red

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232 Thomas Gibson Bowles, *The Defence of Paris: Narrated as It was Seen* (London: Sampson Low, Son, and Marston, 1871), 278.
233 Bowles, 278.
Cross hospital in the Grand Hôtel “seems to me overmanned, for the number of the healthy who receive pay and rations from its funds exceeds the number of the wounded.”

This disorganization often caused confusion when the ambulances scoured the environs of Paris for wounded. The presence of the volunteer ambulances often worsened the confusion: “Having no direct communication or liaison with the army, these volunteer units proceeded to clog up the roads leading to the front, and, due to lack of accurate information, often appeared where least needed while other areas were overwhelmed with wounded.” Whitehurst described such a scene in early December in which several ambulances were summoned to bring additional medical supplies to a group of wounded soldiers. Upon their arrival, the various ambulance personnel realized that the wounded had been evacuated three hours earlier.

According to Crane, “Ambulances were sent off one after the other to grope their way…to the corps to which they had been assigned, or to hunt up some special field of usefulness.” The battlefield disorder was also present outside besieged Paris. Charles Ryan of the Anglo-American ambulance recounted, “We cannot but remember the appalling disorganization and incompetence of the French voluntary ambulances, which were never found when wanted, and which when they did appear, brought with them little or nothing that was necessary to make a battlefield ambulance useful.”

The French Society was not the only service blamed for contributing to the inefficient post-battle ambulance activity. Volunteering in a medical capacity during the siege of Paris,

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237 McAllister, 98.

238 Whitehurst, 2:103.


240 Charles Ryan, *With an Ambulance during the Franco-German War: Personal Experiences and Adventures with Both Armies* (New York: Charles Scribner’s Sons, 1896), 82.
Cameron J.F. Stuart Macdowall discussed the French army medical corps’ ineptitude in directing ambulances following a French sortie in November:

As many as forty staff surgeons, with ambulances, carts, stretchers…were kept all day long, by order of the Intendance [sic], on a plateau whilst, wounded…died outright for want of their services. On subsequent occasions many surgeons moved rapidly to the front without orders, and were of course welcomed and useful (emphasis original). 241

Also indicating the disorder in the Service de santé, George Halstead Boyland remarked that during the siege of Metz, the French army medical service did not coordinate the aid efforts, and, consequently, “Each ambulance seemed to work for itself.” 242 Similarly, an English volunteer with the French Society’s fifth ambulance believed that the French army possessed enough surgeons, but due to the shortage of reliable information about the number and location of the injured, some physicians acquired too many cases while others received hardly any wounded. 243

More often than describing the disorganization of medical facilities, observers recorded instances of misuse of both the Red Cross symbol and medical-volunteer status. This misuse generally took three forms, and the exploitation of the Geneva Convention’s neutrality statute was the most frequently cited abuse. Despite the questionable motives of certain ambulance volunteers, many men and women performed exhausting medical work with diligence and compassion, and, as Taithe maintains, “Even vanity ambulances served a purpose.” 244 In fairness to the medical work accomplished by women, their contributions did not remain unnoticed. For

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241 Cameron J.F. Stuart Macdowall, On a New Method of Treating Wounds, (Gruby’s System) and the Medical and Surgical Aspects of the Siege of Paris; Outlines for a Non-Official Report to the Physician Rt. Hon. the Minister of State for India (London: J. and A. Churchill, 1871), 5.
242 George Halstead Boyland, Six Months under the Red Cross, with the French Army (Cincinnati, Ohio: Robert Clarke, 1873), 104.
243 National Aid Society, Questions, 46.
244 Taithe, Defeated Flesh, 86; both Christiansen, 191, and Kranzberg (despite his cynicism), 69-70, make comparable claims about the enthusiasm of ambulance and hospital workers.
instance, Comte d'Hérisson witnessed “many brave women of Paris belonging to every social class” laboring on the battlefields and in the temporary hospitals.245

The Geneva Convention’s Article 5 “explicitly protected ambulances and personnel from requisitions and invading armies.”246 While the 1864 treaty contained no punitive measures to guarantee the proper use of the Red Cross emblem, the French Society had not taken any disciplinary initiative before the war, which likely fostered the widespread abuse of this symbol. In January 1870 the International Committee in Geneva reviewed replies to an inquiry distributed to the various aid societies in Europe concerning what regulations had been formulated in each nation to ensure the application of the terms of the Geneva Convention during conflicts. As a testament to the slow implementation of this treaty since 1864, only ten states of the twenty-two signatories of the Convention reported that they had arranged for the recognition and appropriate use of the Red Cross symbol; France was not among the states that had taken these important steps.247

Closer to the beginning of the Franco-Prussian War, efforts to promote an understanding of the Geneva Convention in France failed. In Paris when France declared war, Henri Dunant attempted to contact his military and royal acquaintances in order to remind these individuals about the nation’s commitments under the Convention. After being rebuffed several times, Dunant eventually arranged for a discussion in the Senate of the Red Cross insignia, but Baron

245 Comte d’Hérisson, 252; likewise, Nathan Sheppard praised the work of the Sisters of Charity during the siege, 265-267. Besides directly caring for the wounded, women played a valuable role in collecting materials to be used as dressings and bedding in the various medical facilities; “ambulances needed a whole human infrastructure to support the medical effort,” Bertrand Taithe, Citizenship and Wars: France in Turmoil, 1870-1871 (London: Routledge, 2001), 111.
246 Taithe, Defeated Flesh, 171.
247 Pierre Boissier, From Solferino to Tsushima: History of the International Committee of the Red Cross (Geneva: Henry Dunant Institute, 1985), 236-237; the states that had implemented the necessary measures were: Austria, Baden, Bavaria, Hesse, the Netherlands, Prussia, Russia, Sweden, Switzerland, and Württemberg.
Brénier, speaking on this topic, had his voice “drowned out by the tapping of paper knives on desks…and the sound of voices, as the bored senators went on with their conversations.”

Jules Favre, Minister of Foreign Affairs under the recently formed Third Republic, publicized Article 5 by publishing the statute in the government’s *Journal Officiel* on 12 September 1870. Occurring at a time in which the possibility of a siege appeared increasingly likely, the publication of this statute was, for many Parisians, “A heaven-sent means to protect oneself and one’s residence.” Eyewitnesses often described situations in which people exploited the Convention, establishing makeshift hospitals under the flag of the Red Cross in their apartments and homes. These people hoped that by providing limited aid to a small number of wounded, they would be relieved of responsibilities for housing soldiers or French refugees. As Hutchinson explains, civilians “quickly grasped that claiming to care for a wounded soldier might exempt them from this onerous and universally detested obligation.” While the French army did not have a sufficient knowledge of the Geneva Convention until late in the war, the French population developed a skewed understanding of the document’s provisions, adopting the Convention’s most directly applicable “war insurance” measures.

As civilians learned that claiming to succor a wounded soldier might exempt them from the wartime requisitioning and billeting, Red Cross flags “quickly appeared on every house and habitation.” Edmond de Goncourt perceptively observed, “The wounded man has become fashionable….He is an object of utility….He defends your dwelling from invasion by the

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248 Moorehead, 66. Although Brénier had previous associations with the French Society, he possessed a limited knowledge of the Red Cross emblem, and his speech “lacked assurance and precision,” Boissier, 248.
250 Boissier, 251.
251 Hutchinson, 116.
252 Taithe, *Defeated Flesh*, 171.
253 Hutchinson, 116.
suburban population; he will save you later from fire, pillage, and Prussian requisition.”254 When investigators asked the British aid society’s respondents about private ambulances being used as a means of protecting property, Staff Surgeon James Jameson, Dr. Thomas Guy, and a Mr. Dowling each reported that this practice was a frequent occurrence.255 At the end of September 1870, an eyewitness in Paris wrote that “every fourth or fifth house sports a small white flag with the red cross of Geneva,” noting that any injured person taken to one of these private ambulances would discover that the Red Cross insignia “has been adopted as a talisman against Prussian shells.”256 Additionally, Goncourt recounted a story heard from an acquaintance in which a Parisian, searching for patients to fill the makeshift hospital in his house, visited a local hospital and paid three thousand francs to obtain the facility’s wounded.257

Observers stationed outside Paris described comparable scenes of the abuse of the neutrality article. Charles Ryan, for example, contended that French peasants “convert their houses into ambulances, outside of which they hang the Red Cross flag. Thereby, they exempt themselves from having the invaders billeted on them.”258

As the second form of misuse, men sometimes volunteered for ambulance service as a way to shirk military duty in the French army. By relying on a quick supply of volunteers and lacking, for the most part, trained medical personnel and an efficient organization, both the Service de santé and the French Society cultivated an environment in which this exploitation

255 National Aid Society, Questions, 19.
256 An Oxford Graduate, Inside Paris during the Siege (London: Macmillan and Co., 1871), 37. Sarcey sarcastically pointed out that by displaying the Red Cross flag, people acted “just as if the artillermen of the enemy could see this bit of rag stuck at the end of a stick three leagues off, and respect the property protected by this mark,” 100.
257 Becker, 146. Labouchère described a similar incident in which ambulance personnel offered bribes to the wagon teams carting the wounded back from the battlefield: “A man with a broken leg or arm was worth thirty francs,” 208.
258 Ryan, 81.
could proliferate. Although the investment of a large city such as Paris seemed to alleviate the
problem of finding an adequate number of stretcher-bearers, these volunteers remained without
special training. With regard to the *infirmiers*, Gordon claimed that the surgeons “deplore the
present inadequacy in numbers as well as in qualifications” and concluded that the siege
reflected “the great importance of establishing for all hospitals, whether of the army or not, a
corps of steady, respectable, and tolerably well-educated men as ward attendants—men who
could appreciate the requirements of sick and wounded, and comprehend the serious and
responsible nature of their duties.”

Kranzberg indicates that “many able-bodied ‘slackers’ found jobs in hospitals so that they
would not have to face danger elsewhere.” Eyewitness evidence supports this contention; for
instance, Labouchère commented in early October that “the complaints of the newspapers
against the number of young men who avoid military duty by hooking themselves on in some
capacity or other to an ambulance are becoming louder everyday.” Another writer
observed a comparable scenario, asserting that “many of the young French swells, to keep from
going into the field, had donned the ambulance uniform and passed their time loafing about the
cafés in the Boulevards.” Henry Vizetelly reported that on account of the increase in the
practice of avoiding military service by volunteering in ambulances, police officers began

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259 Gordon, 34.
260 Kranzberg, 69. For Henry William Gregg Markheim, the cynical “Oxford Graduate,” the appeal of
joining an ambulance went beyond shirking military duty: “If the ambulances kill eighty per cent [sic] of the
wounded, they are made a good thing of by the living. Do you wish to escape service in the field? Join an
ambulance. Are you anxious to keep your feet warm…and to eat beef-steaks every day of the siege? Enlist in an
ambulance. All you have to do is to let the wounded die,” 235.
261 Labouchère, 70.
Literature and Science* 12 (July 1873), <http://www.gutenberg.org/dirs/1/4/6/9/14691/14691.txt> (1 October 2008);
MacCormac also attested to this practice, 26.
arresting any person wearing a Red Cross armband who could not show an official document indicating his position as a surgeon or infirmier.263

The third type of exploitation involved using volunteer service as a means of self-promotion. Although many of the temporary hospitals were established with humanitarian goals in mind, some ambulances were created by publicity-seeking organizations or individuals.264 Again, this misuse reflects France’s failure to prepare its medical services prior to 1870: “The ease with which both ladies of quality and shirkers could obtain red cross [sic] armbands is a striking reminder of how little effort had been made by the government to ensure that France complied with the provisions of the Geneva Convention.”265 While the several aid societies each issued Red Cross badges, this emblem was also available for purchase in shops, and due to the extent of this distribution, “The Red Cross badge became valueless.”266

Both historians and observers generally identify this practice of self-promotion with women more than with men. Christiansen suggests that many middle- and upper-class women volunteered in ambulances as a compensation for the absence of “peacetime arenas” of social status, and Kranzberg cynically explains that “this ambulance craze was one which the women of Paris carefully fostered. Nurses’ uniforms set the pace in feminine styles, and the hospitals were tended mostly by young girls and actresses, perhaps not so much for the patriotic and humanitarian reasons as for the amorous diversions which nursing afforded.”267 O’Shea noted that “petty jealousies were not unknown among the fine ladies who had turned hospital nurses

264 Kranzberg, 68. O’Shea expressed his certainty that Paris contained “too many toy ambulances, and too few serious ones” during the siege, 1:151.
265 Hutchinson, 115.
267 Christiansen, 191; Kranzberg, 68. Another historian writes about the trendiness of displaying one’s support for aid societies during the 1860s: “Aristocratic ladies were to be seen on the society pages of fashionable magazines wearing white aprons with red crosses over their ordinary clothes beneath the immense flowery and feathery hats of the day,” Moorehead, 62.
because it was fashionable,” and Markheim believed that the Parisian ambulances contained too many young women that “look what the English fair describe as ‘so becoming,’ and what Parisiennes [sic] call ‘so interesting.’” Acerbically, Goncourt recounted meeting “old streetwalkers with red crosses on their left breasts, fat fancy women too old for their trade, who rejoice at the prospect of caressing the wounded with sensual hands and picking up a little love among the amputations.”

Historians and witnesses describe other less-frequently employed types of misuse of the medical services and of the Red Cross emblem. Pilfering from the wounded and the deceased, for example, is commonly associated with the personnel of the volunteer ambulances. Discussing the unflattering postwar evaluation of the Geneva Convention, Geoffrey Best indicates that “French and Germans alike had observed, with equal nausea, that advantages had been taken of the Geneva emblem by those who still pursued the immemorial occupation of robbing the wounded and dead after battle.” In his service as an ambulance volunteer, Boyland experienced “much trouble with our men”; he explained that some of the medical volunteers joined his ambulance “to rob the dead on the field of battle.” Inside Paris a bystander characterized the stretcher-bearers as “mere marauders, who emptied the knapsacks and pockets of the dead…instead of picking up the wounded.”

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269 Becker, 98.
270 The entire spectrum of motives for serving with an ambulance is difficult to ascertain, as people sometimes volunteered for unique reasons. The artist Auguste André Lançon, for instance, worked in a Parisian ambulance in order to observe and paint scenes of the besieged city and images of the unglamorous side of military life, Hollis Clayson, Paris in Despair: Art and Everyday Life under Siege (1870-71) (Chicago: University of Chicago Press, 2002), 63. As a whole, Clayson’s text presents a thorough analysis of its subject matter, denoted by the book’s title.
271 Geoffrey Best, Humanity in Warfare (New York: Columbia University Press, 1980), 152. Christiansen is particularly critical of the stretcher-bearers (“many of them behaved little better than marauding thieves”), 193; Fermer maintains that hospital orderlies were “too often…pilferers looking for opportunities,” 181.
272 Boyland, 26.
273 Sarcey, 223.
Besides commenting on the disorganization and abuses within Parisian medical facilities, observers described the unsanitary conditions in ambulances and hospitals. These remarks suggest that both the French army’s neglect of sanitary reform and the French Society’s ineptitude—when combined with the proliferation of volunteer ambulances and the deteriorating conditions of the siege—aggravated the existing sanitary deficiencies within French medical facilities. Although perhaps an overstatement regarding the hospital environment, Horne’s argument about medical care during the siege reflects this situation: “Owing to the primitiveness of surgery in those days, exacerbated by the traditional ineptitude and squalor of French military hospitals, the badly-wounded knew they could rarely look forward to a happy outcome of their suffering….Chaos among the ambulances had not helped.”

Scholars and eyewitnesses emphasize the lack of adequate ventilation and the proliferation of infection and disease in ambulances and hospitals. Historians such as Christiansen and Horne contend that most Parisian medical facilities were unsanitary. Vividly recapturing the poor sanitary environment in besieged Paris, Taithe asserts that hygienic conditions “could not really exist in the confined and unsanitary boundaries of a besieged walled city. Luxurious drapes in converted hotels or bourgeois homes held the putrid air and made it stagnate, openings let in more putrid air from other wards, soiled sheets and inexperienced nurses carried deadly poisons.” On 23 January 1871 Alexandre Piedagnel pointed out that despite attempts to improve the sanitation within Parisian medical facilities, “Various ambulances on the

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274 Horne, 158.
275 While Christiansen notes that many Parisian ambulances were “hopelessly unsanitary,” 193, Horne describes the city’s major hospitals as “appallingly unhygienic,” 174.
276 Taithe, Defeated Flesh, 74.
interior of Paris have not offered all the desirable hygienic conditions. It cannot be denied…this reproach is still justified now.**277**

When discussing inadequate ventilation and poor sanitation, observers frequently cited the temporary hospital in the Grand Hôtel, whose conditions were “particularly atrocious” in one historian’s opinion.278 As the Grand Hôtel was the French Society’s primary hospital for a portion of the siege, the repeated mentions of this facility are especially noteworthy. Labouchère wrote that the selection of the building as a hospital had been “a great mistake”: the hotel’s stagnant air caused numerous deaths following “the simplest operations.”**279** Sheppard provided similar grim statistics for the Grand Hôtel, explaining that “not more than one in ten who are taken there return alive,” and, referencing this same building, Bowles wryly noted, “Ventilation cannot be said to be imperfect, for there is none.”**280**

Other Parisian medical facilities were also deemed insufficiently ventilated, unsanitary, and prone to infection and disease. In Gordon’s estimate, any precautions taken in selecting buildings for use as temporary hospitals were offset by a lack of attention to adequate ventilation.281 While one eyewitness reported that the dim interior of the temporary hospital in the Église de la Trinité was not well ventilated, Gordon characterized the poorly ventilated rooms of the Corps Législatif ambulance as “nests of infection and danger to their wounded

**277** Piedagnel, 79.
**278** Horne, 174; “It was reputed that a man could not cut his finger in the germ-ridden atmosphere…and reach the door alive,” Horne, 174.
**279** Labouchère, 261.
**280** Sheppard, 186; Bowles, 279. In a different interpretation of this hospital’s environment, Piedagnel indicated that the skilled physicians laboring in the Grand Hôtel rarely performed successful amputations despite “favoring the renewal of air and the free passage of light,” 80. Piedagnel traced the poor surgical results to the ambulance’s unfavorable location in the center of Paris, 80; another observer remarked that this area of the city was “the center of infection,” Sarcey, 216.
**281** Gordon, 57.
occupants.” Gordon provided additional information about the unsanitary conditions in Parisian medical facilities, claiming that “hospital disease”—infections and illness contracted in hospitals and ambulances—caused the majority of deaths among the city’s wounded. Macdowall supported this assessment, stating that the number of deaths from hospital disease during the siege “is known to have been greater than has ever occurred before in the annals of military surgery.”

Relating the instances of hospital disease to Paris’ medical facilities, Gordon explained that these illnesses occurred most frequently in “badly-arranged, ill-ventilated buildings.”

As this chapter has demonstrated, the medical environment in besieged Paris was chaotic: the proliferation of ambulances; the disorder within medical facilities and among the ambulance wagons on the battlefields; the misuse of the Red Cross emblem; and the many unsanitary and crowded temporary and permanent hospitals. Poorly organized and lacking personnel and resources prior to the Franco-Prussian War, both the Service de santé and the French Society contributed significantly to this disordered scene in the French capital. The final chapter will show that the American ambulance provided a contrast to this chaotic medical scene.

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282 Piedagnel, 57; Gordon, 45. Gordon added that Baron Mundy, volunteering for the Austrian aid society, directed the Corps Législatif ambulance excellently and used carbolic acid as a disinfectant; Gordon thus concluded that “the evils of unsuited construction were in this case successfully combated by the excellence of administration,” 45.

283 Gordon, 58.
284 Gordon, 193. Surveying the temporary hospital in the Palais Royal, Gordon pointed out that “pyaemia and hospital gangrene prevailed…to a great extent,” 43.
285 Macdowall, 12; if not a deliberate exaggeration to stress the extent of infection within Paris, the accuracy of the last portion of Macdowall’s comment is debatable.
286 Gordon, 197.
CHAPTER 3- THE AMERICAN AMBULANCE: SUCCESS FROM EFFICIENT ORGANIZATION

Reporting from Paris on 11 November 1870, Henry Du Pré Labouchère proclaimed, “The ambulance which is considered the best is the American. The wounded are under canvas, the tents are not cold, and yet the ventilation is admirable….It is the dream of every French soldier, if he is wounded, to be taken to this ambulance.”\footnote{Henry Du Pré Labouchère, \textit{Diary of the Besieged Resident in Paris: Reprinted from “The Daily News,” with Several New Letters and Preface} (London: Hurst and Blackett, 1871), 202.} Wickham Hoffman, Secretary of the United States Legation in Paris and also in the French capital during the siege, asserted that the American ambulance “was soon so well and so favorably known, that I heard of French officers who put cards in their pocket-books, on which they had written the request that if they were wounded they might be carried to \textit{l’ambulance américaine}.”\footnote{Wickham Hoffman, \textit{Camp, Court, and Siege: A Narrative of Personal Adventure and Observation during Two Wars, 1861-1865; 1870-1871} (New York: Harper and Brothers, 1877), 226.}

Newspaper reporters, medical personnel, and bystanders—French and foreign—consistently described the American ambulance in similar positive terms throughout the duration of the siege from September 1870 until January 1871, and, as the introduction indicated, historians typically echo these contemporary accolades. The praise was a result of the stark contrast between the sanitary conditions, organization, and surgical success of the American ambulance and those of the majority of French hospitals and ambulances laboring during the Franco-Prussian War. As the previous chapter demonstrated, French-sponsored medical facilities were often disorganized and unsanitary. By contrast, the creators of the American ambulance prepared an efficient system composed of clean, well-ventilated tents and a dependable ambulance-wagon service. Consequently, the patients in the American ambulance recovered more successfully than did the wounded placed in French ambulances and hospitals.
A description of the establishment, form, and medical-care regimen of the American ambulance will show that efficient organization was the decisive feature—instead of innovative treatment or superior medical knowledge—for this facility’s comparative medical success and popularity during the siege, and this crucial element was lacking in both the French Society and the Service de santé. Additionally, this account will clarify some of the historical errors about the American ambulance. Following this description, an overview of the contemporary acclaim for the American ambulance precedes a short discussion of the mortality rates of the American facility and of certain other Parisian ambulances and hospitals, thus attesting to the American service’s superior medical results. This chapter will also give credit to Dr. Edward Crane for his role in developing the American ambulance and in later composing the lengthiest sections of Evans’ history of this facility.

Dr. Thomas Evans provided the impetus for the American ambulance. Evans and his wife had lived in Paris since 1847, his professional and social ambitions originally motivating the young dentist to move to the French capital. Through an acquaintance, Evans gained a position with Dr. Cyrus Starr Brewster, a prominent dentist with an elite clientele. In July 1850, with Brewster visiting in the United States, Evans attended to then-president Louis Napoleon’s toothache, eventually developing a close friendship with the future emperor and his family. Within ten years, Evans had established a successful dental practice with a distinguished list of

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290 In his correspondence, Crane was not modest about his role in creating the American ambulance. Writing to Colonel Moore, Crane stated that the service “never would have existed but for the persistent efforts which I made” and that “the work of organizing the American Ambulance [sic] was entirely my own, so far as that ambulance may have represented any special principle of Sanitary Science [sic].” (emphasis original), Edward A. Crane, Paris, to Col. Moore, LS, 21 March 1871, History of Medicine Division, National Library of Medicine, Bethesda, Md.
patients that included various royal households throughout Europe. Discussing Evans’ accomplishments, Branch suggests that Evans “was attaining wealth, a reputation, and a social position probably unequalled by any other dentist before or during his time.”

Evans’ interests were not limited to dentistry. He also studied military hygiene and expressed concern over the plight of sick and wounded soldiers, journeying to Russia in 1856 to witness the battlefield carnage in the Crimean War and to military hospitals in Milan, Brescia, Turin, and Castiglione during the 1859 French campaign in Italy. Particularly fascinated by the Civil War work of the United States Sanitary Commission, Evans indicated that he had decided, as early as 1865, “To assemble in a collection and at my own expense, the products of these inventions which had enabled the Sanitary Commission to obtain its wonderful results.” At Evans’ request, Crane, also living in Paris, traveled to the United States to collect the necessary items and equipment for Evans’ proposed collection, which included medical books, photographs, hospital clothing and food, stretchers, hospital furniture, surgical instruments, hospital tents, and various ambulance wagons.

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291 This information about Evans is drawn from Anthony Douglas Branch, “Dr. Thomas W. Evans, American Dentist in Paris, 1847-1897” (Ph.D. diss., University of California Santa Barbara, 1971), 1, 5, 24, 50.
292 Branch, 50.
293 Branch, 115-116.
295 Branch, 129; Gerald Carson, The Dentist and the Empress: The Adventures of Dr. Tom Evans in Gas-Lit Paris (Boston: Houghton Mifflin, 1983), 99. Crane was a dentist who joined Evans’ practice after the Civil War, Branch 128; during the Civil War, Crane worked as an inspector for the Sanitary Commission, Evans, La Commission sanitaire, 141.
In Evans’ opinion, the 1867 Paris Exposition “afforded the best opportunity for the inauguration of this sanitary collection,” and because the Sanitary Commission lacked the necessary funding and was almost nonfunctioning at the time, Evans’ collection served as the foundation of the American sanitary exhibit.296 Discussing the importance of the United States’ presence at the 1867 Exposition, Merle Curti argues, “American participation…was the first really impressive proof to Europe of the great strides the country had taken even in the midst of civil war.”297

While many observers bemoaned the shortcomings of certain American displays, the American sanitary exhibit was well received.298 In an August 1867 letter to Evans congratulating him on the display, Dr. Chenu expressed his belief in “the incontestable superiority of the means employed in the United States.” He stated that “the ambulance wagons, vehicles, alimentary preserves, proofs of attention of every kind, all bear the stamp of the most enlightened patriotism, and of the importance which the Americans attach to the preservation of human life and the alleviation of the inevitable evils of war.”299 Not surprisingly given his arrogant personality, Evans himself attested to the superiority of the sanitary exhibit, asserting that the display was preferable to all similar collections at the Exposition in both quality and quantity.300

296 Evans, Sanitary Institutions, 184; Branch 129; Carson, 98. According to Branch, the Sanitary Commission “agreed to include four of their ambulance wagons and other heavy equipment in Evans’ exhibit because Evans agreed to pay the costs of transportation and construction [of] a building on the fairground,” 129. For a detailed list of the features of the American medical display, see, Evans, Report, 29-46. Concerning the status of the Sanitary Commission, Foster Rhea Dulles explains that the American Association for Relief of the Misery of the Battlefields was formed in January 1866 to replace the Sanitary Commission; before becoming defunct in 1872, this second organization lobbied for American ratification of the Geneva Convention, The American Red Cross: A History (New York: Harper and Brothers, 1950), 10-11.
298 Curti, 843-844.
299 Evans, Sanitary Institutions, 191.
300 Evans, Report, 29.
His boast appears reasonable, as the exhibit won a *Grand Prix d'Honneur*, described as “the highest expression of estimation which it was possible for the Imperial Commission to give.”

The superiority of the American ambulance wagons and hospital tents provided a particular contrast to the European models. Evans wrote that the ambulance wagons “are superior to all others exhibited,” adding that “their principal merit is lightness, the heaviest weighing not over 1,300 lbs., while the average weight of European two-horse ambulances [wagons] is about 2,000 lbs.” At the beginning of the American Civil War, larger ambulance wagons—weighing approximately the same as the “four-wheeled French wagon”—were tested but were soon abandoned due to problems with the vehicles’ unwieldiness. Lighter, four-wheeled carriages replaced these larger wagons with favorable results. Another important characteristic of the American wagons was the “enameled cloth or cotton duck [canvas]” covering that was both breathable and impermeable to rain. By contrast, Evans characterized European ambulance wagons as “closed omnibuses” constructed entirely of wood.

Two American ambulance-wagon designs received individual awards at the Exposition. Dr. Benjamin Howard’s model was the most highly touted, winning “an honorable mention from the Imperial Commission, and a silver medal (the highest prize awarded) from the special jury appointed by the *Société de Secours aux Blessés*”; this jury awarded Evans a prize of five

303 Evans, *Sanitary Institutions*, 170; referencing these problems, Evans noted that “four horses were often insufficient to extricate them from the mud, or pull them over roads rendered difficult by the passage of wagon and artillery trains,” *Sanitary Institutions*, 170.
304 “It was admitted universally, after four years experience, that they [the lighter wagons] were sufficiently strong for the special service to which they were destined, and vastly superior to the heavy vehicles which they had succeeded,” Evans, *Sanitary Institutions*, 170-171.
hundred francs for his wagon design. 307 Evans discussed his model, pointing out that it was built “with the purpose of uniting a possible capacity for four recumbent, with lightness, easiness of movement, facility of loading and unloading, and simplicity.” 308

The American hospital tent was also superior to the other tents at the Exposition, and, like the American wagons, had been used during the Civil War. Among the five different hospital tents, the American model was “generally admitted to best realize the facility of pitching and striking, solidity, transportability, simplicity.” 309 While the French tente conique was not a specialized hospital tent and the English design was too costly and difficult to transport, the Prussian tent appeared cumbersome and failed to properly incorporate a tent fly, which was the American design’s “really distinctive feature.” 310 Additionally, the American tents used the same cotton-duck material as the American wagons, a material considered superior to the linen canvas of which the European tents were constructed due to the cotton-duck’s lower cost, better qualities of permeability, and superior durability. 311

With the close of the 1867 Exposition, Evans stored the contents of the American sanitary display, which were again used as part of the American ambulance’s facilities during the siege. 312 Regarding his efforts to promote voluntary aid societies and the American ideas and

307 Evans, Report, 31-32. For a concise list of the awards that the American sanitary collection received, see, Evans, Sanitary Institutions, 185-186.
308 Evans, Report, 32. The chief default of the American ambulance wagons was the difficulty in turning the vehicles, a criticism that Evans claimed did not apply to his design, Evans, Report, 31.
309 Evans, Report, 35. The American sanitary display contained two models of tents: a “wall tent,” capable of accommodating eight patients, and an “umbrella tent,” designed by a Mr. Richardson, Evans, Report, 40-42; this section will only focus on the “wall tent” model.
310 Evans, Report, 35-36. While the tent fly provided protection from rain, humidity, and excessive solar heat, the space between this covering and the tent allowed for air circulation, Evans, Report, 42. Evans remarked that the English tent possessed an admirable system of ventilation and suggested that the American tent, having “no special arrangement for roof ventilation,” would benefit from the use of the English structure’s “sliding ventilator,” Report, 42, 36. During the siege the American ambulance addressed this ventilation concern, as Crane indicated that the American ambulance’s tents “were all thus furnished with ridge ventilators,” Evans, American Ambulance, 396.
311 Evans, Report, 36, 42.
312 In a somewhat boastful manner, Evans’ detailed his post-Exposition handling of the American collection: “Indeed so attractive a subject of interest has this collection proved to be as well as so efficient a means
sanitary materials, Evans for the most part remained silent from 1867 until 1870: “Evans no doubt realized the weight of the forces against sanitary change within the [French] Army [sic], and he was not one to collide with such entrenched forces. Certainly the Emperor and Empress had appreciated his efforts, even if the Emperor at the time was most worried about even more fundamental changes in military administration.”

With war looming in 1870, Evans determined that the impending conflict was an opportunity to provide “a practical demonstration of the value of the improved methods of treating the wounded, whose results, as illustrated by the experience of the ‘United States Sanitary Commission’ and the American Government [sic], I had been endeavoring for many years to bring to the knowledge of the friends of sanitary reform throughout the world.”

Motivated by this objective, Evans met with approximately twenty-five American citizens in Paris on 18 July to discuss the possibilities for aiding the wounded on both sides of the battlefield.

The convened Americans worked quickly to achieve Evans’ goal of a functioning display of the American system for “the transport, shelter, nourishment, and medical and hygienic treatment of the wounded”: Evans, acting as chairman of the meeting, indicated that the Americans would render the most valuable assistance by organizing one or more temporary field-hospitals with a capacity of forty to fifty patients “on the plans which had been found so satisfactory during the American war” in order to demonstrate the superiority of the American

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of disseminating useful and practical knowledge, that with the close of the Exhibition, I have been encouraged to enlarge it, and at the same time to give to it an international character by making it a permanent repository of what ever [sic], in the hospital service of armies, shall have been invented or employed for the purpose of ameliorating human suffering,” Evans, *Sanitary Institutions*, 187. While Evans maintained the American display as a permanent exhibit, it does not appear that other items were donated to this collection.

313 Branch, 138.
techniques and materials over those still used in Europe.\textsuperscript{315} Furthermore, the group established the American International Sanitary Committee, a five-person council charged with directing the American ambulance and coordinating with other aid societies in France.\textsuperscript{316}

Aware of the administrative deficiencies of the Service de santé and the unclear relationship between the military medical service and the voluntary aid societies, Evans and his colleagues decided that the American ambulance should remain an independent, American-run facility. This sentiment was reinforced during a late-August discussion about whether the American ambulance should remain in Paris or follow the volunteer ambulances into the field. While Dr. Marion Sims, the Surgeon-in-Chief, and his surgical staff desired to leave Paris under the direction of the French Society, Evans and some of the Committee reasoned that staying in the city was the better option.\textsuperscript{317} After this debate Evans asserted,

\begin{quote}
If it was found to be impossible to maintain a distinctly American organization, it appeared to them [those who supported remaining in Paris] that the sooner the Committee was dissolved the better, and for the very sufficient reason that it had been created for a specific purpose, and had delegated to it [the Committee] no powers to act in any other way than as the visible and immediate agent of American sympathy and benevolence.\textsuperscript{318}
\end{quote}

\textsuperscript{315} Evans, American Ambulance, 4-6.
\textsuperscript{316} Evans, American Ambulance, 5-6. The members of this committee were: Dr. Evans, president; Dr. Crane, secretary; Colonel James McKaye; Albert Lee Ward; and Dr. Thomas Pratt, Evans, American Ambulance, 6. Albert Lee Ward was a New York philanthropist living in Paris, and McKaye was a retired army officer, Branch, 150. Branch indicates that Reverend W.D. Lamson of the American Church of the Holy Trinity was a member of this committee but does not include Pratt, 150. In fact, Lamson and J.W. Tucker were elected as additional committee members on 2 September (possibly to replace McKay, who left Paris for unspecified reasons at the end of August), Evans, American Ambulance, 22, 24.
\textsuperscript{317} When a vote on the issue showed a tie, Sims and a contingent of the Committee joined with a group of English medical volunteers to form the Anglo-American ambulance, which provided valuable aid after the battle at Sedan. Pratt was also one of the Americans who enlisted in this ambulance following this split in opinion. In addition to Sims, Charles Ryan and William MacCormac wrote accounts of their service with the Anglo-American ambulance.
\textsuperscript{318} Evans, American Ambulance, 22. Considered in relation to the history of American philanthropy abroad, the service of the American ambulance represents Merle Curti’s description of the initial period of humanitarianism that lasted from the nation’s founding through the nineteenth century: “In general, each foreign disaster was met in a characteristically American ad hoc way: there was little formal or institutional connection between what was done on different occasions,” Merle Curti, American Philanthropy Abroad: A History (New Brunswick, N.J.: Rutgers University Press, 1963), 619.
The Committee urged Americans throughout Europe to donate funds and aid supplies. Publishing appeals in various newspapers, the Committee received approximately nineteen thousand francs during July and August. In addition to his donation of the contents of the 1867 American sanitary exhibit, Evans contributed the majority of funds. Concerning the lack of monetary and material aid from the United States, Evans appeared especially perturbed. After repeatedly petitioning Dr. Henry Bellows, president of the American Association for Relief of the Misery of the Battlefields, and Dr. Elisha Harris, formerly an influential member of the Sanitary Commission, Evans harshly explained,

Not one particle of assistance, either in money, kind, or counsel, was ever received by the Paris Committee…during the entire duration of the Franco-German war [sic]—from those who had been the representatives of a magnificent example of civilian philanthropy, and who had also themselves received such generous European aid, during the great struggle in the United States.

Evans’ indictment of the American philanthropic organizations is moderated by the fact that Evans and Bellows’ relationship was never very affectionate. According to Branch, “Feelings between Evans and Bellows had never been particularly cordial anyhow. Bellows had long referred sarcastically to Evans as the ‘foreign historian’ of the United States Sanitary Commission.”

The donated contents of the 1867 exhibit consisted of—among other items—four tents, six ambulance and medicine wagons, medicine and medicine bags, surgical instruments, hospital

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320 With the exceptions of items donated intermittently by the French Society, resources collected by the Committee, clothing and food contributed by charitable Parisians, and a gift of five thousand francs from Englishman Richard Wallace, “The entire cost of maintaining the ambulance from first to last was met by the president [Evans], who was also left to assume the liquidation of the debts contracted by the Committee,” Evans, *American Ambulance*, 34.
321 Evans, *American Ambulance*, 15; several pages later, Evans took another opportunity to make this point: “Not a dollar was ever sent from the United States in aid of the American ambulance, whether in response to private or public calls for help….Let the responsibility rest with those to whom it belongs—with those who assumed at the time to be, in the United States, the organs of American international charity,” *American Ambulance*, 34. For more details on these petitions, see, Evans, *American Ambulance*, 6-15, and Branch, 153.
322 Branch, 153, n. 13.
furniture, and bedding.\textsuperscript{323} Determining that the ambulance required additional tents and that structures similar to the American model could not be procured in Europe, the Committee telegraphed Horace Ely of New York on 19 July and requested ten hospital tents.\textsuperscript{324} On 22 August the Committee received the tents, supplied by General Montgomery Meigs, United States Quarter-Master General, thus completing the preparations for the temporary hospital.\textsuperscript{325} On 1 September the hospital tents were erected on a plot of land on the Avenue de l’Impératrice obtained from the Prince and Princess de Bauffremont, and by the evening of 17 September, the fourteen tents were ready to accept fifty patients.\textsuperscript{326} Unexpectedly, Evans and Crane accompanied the Empress as she fled Paris for England following the collapse of the Second Empire in September 1870. While Crane returned to the French capital to assist the American ambulance, Evans remained outside the city for the duration of the siege. Before Crane returned to Paris, Evans authorized Crane to act as his representative on the Committee and in directing the American ambulance.\textsuperscript{327}

As it appeared during the siege of Paris, the American ambulance contained two long pavilions, each consisting of five to six standard hospital tents joined together.\textsuperscript{328} Along with

\textsuperscript{323} Evans added that the Committee gathered “a large quantity of anesthetics (especially of ether), and…a good supply of stores, including wines, preserved beef, biscuit, candles and candlesticks,” \textit{American Ambulance}, 17.

\textsuperscript{324} Evans, \textit{American Ambulance}, 8, 11.

\textsuperscript{325} Evans, \textit{American Ambulance}, 16, 19; Branch, 154.

\textsuperscript{326} Evans, \textit{American Ambulance}, 23, 30. The name of this street changed to the Avenue du Général-Uhrich after the fall of the Second Empire, then to the Avenue du Bois-de-Boulogne in 1875, and finally to the Avenue Foch, Carson, 140. According to Crane, the plot on which the American ambulance was established was “on the north side of the Avenue de l’Impératrice, about halfway between the Arc de Triomphe and the Bois de Boulogne, was an open lot, containing nearly an acre and a-half \textit{sic} of ground,” Evans, \textit{American Ambulance}, 511; however, this space was not ideal: “It was flat, covered with rank vegetation, and had the appearance of a rich but neglected garden…previously to our occupation it had been used for a dog show—several hundred dogs having been encamped there, during a considerable part of the summer of 1870,” Evans, \textit{American Ambulance}, 512.

\textsuperscript{327} Evans, \textit{American Ambulance}, 26; Evans also sent Crane an authorization allowing Crane to withdraw funds as-needed from Evans’ Rothschild account, but as a result of the severing of communication lines due to the siege, Crane did not receive the notice until December 1870, Evans, \textit{American Ambulance}, 27. Branch notes that Evans contacted a London medical warehouse, S. Coxeter and Son, that shipped medical supplies to Paris for the American facility before the Prussian encirclement was complete, 161.

\textsuperscript{328} Evans, \textit{American Ambulance}, 514. Crane believed that the tents’ ability to be connected in this manner was “of such great importance, that I am surprised it has been so universally overlooked by those who may have in
these rectangular tents, the American ambulance contained a large round tent for wounded officers and various tent-barracks—simple structures consisting of boards and a canvas roof—that functioned as wards for patients, operating room, kitchen, pharmacy, staff dining rooms, linen room, and offices. In December 1870 the ambulance’s leaders, agreeing that the facility could be enlarged, increased the capacity—already raised from September to one hundred beds—to 150 by using a nearby house to receive the “slightly wounded.”

The American ambulance functioned throughout the duration of the siege from September 1870 until January 1871. Various accounts propose different closing dates for this temporary hospital. Examining the sources, it seems most reasonable that, as proposed in Crane’s report, the American ambulance closed on 26 March 1871. The information in Dr. John Swinburne’s surgical history of the American ambulance concurs with Crane’s assertion; this material suggests that the final patient was admitted on 4 February 1871, and the last patients discharged from the American ambulance left the facility on 25 March 1871.

Certain sources seem to indicate that a group of Americans, some previously associated with Evans’ American ambulance, continued a temporary hospital service in Paris after the closing of Evans’ facility in late March. For instance, one text claims that the American ambulance continued to work during the entirety of the Paris Commune, a turbulent period of Parisian self-rule that lasted from 18 March 1871 until the bloody finale of 28 May 1871.

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329 Evans, American Ambulance, 450-455, 514. Other smaller buildings were used as a morgue, storehouse, dormitories for the male nurses, sheds, and stables, Evans, American Ambulance, 453-454.
330 Evans, American Ambulance, 455.
331 Evans, American Ambulance, 495.
332 Evans, American Ambulance, 679, 670, 676. Swinburne’s report is itself a testament to the careful organization of the American ambulance. This document contains detailed information about the medical condition of each patient who died at the ambulance.
According to this source, Swinburne left Paris on 18 March, “But the ambulance, and the
gentlemen he had trained, remained, and did noble service in the era of blood that followed.” More recently, historians have also offered different closing dates.

The structure and grounds of the ambulance and the treatment methods used by the ambulance staff contributed to the American ambulance’s favorable medical performance and the public’s positive reception of this service. An analysis of these elements demonstrates that the efficient organization of the facilities and treatments played a much larger role in the American ambulance’s success during the siege than either innovation or superior medical knowledge, and this efficient organization was conspicuously absent in most of the French ambulances and hospitals. Supporting this argument, this discussion shows that many of the features and treatments used in the American ambulance were also employed in French medical facilities both before and during the Franco-Prussian War.

The use of tents instead of existing buildings for housing the wounded was a crucial element of sanitary care in the American ambulance. While acknowledging that the American ambulance “was…really composed of a ‘tent hospital,’ a ‘tent-barrack hospital,’ and ‘a house converted into a hospital,’” Crane carefully pointed out that the house and the tent-barracks “were never considered as other than mere dependences of the tents, which always held the post

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334 Citizens’ Association, 103. Similarly, a New York Times article described events from 9 April 1871: “As we got to the American ambulance, I saw one of its members, Mr. Hugo, who had been sitting in front of the tents, run forward,” “Mail News from Europe,” New York Times, 24 April 1871. Besides Mr. Hugo, this report also mentioned a Dr. Cormack; each of these men served with the American ambulance during the siege of Paris.

335 Branch notes that the American facility worked until February 1871, 168. In his intelligent and well-researched analysis of how events in the United States shaped the country’s perception of the Paris Commune, Philip M. Katz suggests that American ambulance functioned for “at least the opening fortnight of the revolution [Paris Commune],” Philip M. Katz, From Appomattox to Montmartre: Americans and the Paris Commune (Cambridge, Mass.: Harvard University Press, 1998), 40; Katz’ sources indicate that Americans continued to aid the wounded after the closing of Evans’ ambulance.
of honor, not only topographically, but from the higher hygienic importance attached to them.”

Indeed, the tent-barracks were used because the ambulance personnel could not locate any suitable tents in the city, and they preferred the tent-barracks to existing houses for treating patients. Tent-hospitals possessed the advantages of portability, low cost, and easy sanitation. Crane contended that a tent structure “is not more expensive than other kinds of shelter, while it is the only special shelter which can be employed for ambulant hospitals”; he continued, “Experience has proved [tents] to be better than any other for the organization of temporary hospitals, from a strictly sanitary point of view; it exposes the smallest amount of material to infection, and is capable of the completest [sic] and most constant ventilation.” As Dr. Charles Gordon explained, the occurrence of hospital disease was “apparently at its minimum” in temporary structures of canvas and wood, and the advantages of tent-hospitals over houses was “so apparent as the siege advanced, that their further extension was in progress at the time the capitulation of Paris took place.”

In using tents as hospitals, the Committee was not acting without precedent. Crane himself admitted this point: “I have certainly not wished to say that at our ambulance tents were for the first time employed in Europe or elsewhere to give shelter to the sick and wounded, nor did I intend to convey the idea that they had not occasionally been so used in armies at all seasons of the year.” In 1855 Dr. Michel Lévy of the Service de santé established a tent-hospital at Varna during the Crimean War. While this facility produced satisfactory results,

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336 Evans, American Ambulance, 455; Crane asserted that for the ambulance’s visitors, the tents “were, of course, always the chief object of interest,” Evans, American Ambulance, 450.
337 Evans, American Ambulance, 515-516. With roofs constructed from French linen instead of American cotton-duck, these tent-barracks leaked throughout the winter; when additional layers of this material were applied to the roofs to alleviate this leakage, the linen allowed through significantly less air, Evans, American Ambulance, 516.
338 Evans, American Ambulance, 240-241.
339 Charles Alexander Gordon, Lessons on Hygiene and Surgery from the Franco-Prussian War (London: Baillière, Tindall, and Cox, 1873), 58, 53.
340 Evans, American Ambulance, 457.
Lévy opened the tent-hospital due to the shortage of nearby permanent buildings during a cholera epidemic. Furthermore, Lévy believed that tents were reliable hospital facilities only in the warmer months of the year. The British also used tents as field hospitals during the Crimean War. Crane remarked that for the British army, “The practice of maintaining the regimental hospital under canvas was indeed quite common some time before the Crimean War.” These tent-hospitals were not intended for critical patients and, as with the French, were deemed unsuitable for cold climates.

During the Franco-Prussian War and the siege of Paris, the Service de santé and the French Society constructed both tent-hospitals and barrack-hospitals. While the French army lacked a tent specifically for hospital purposes in 1870, the Service de santé possessed an infantry tent, and attempts were made to use a variety of tents for hospitals at the beginning of the siege. Unfortunately, the infantry model was “inconvenient for hospital purposes,” and the assortment of tents used in Paris “presented various disadvantages compared to those of the Americans.” Describing the French army tents in more detail, Crane characterized these designs as “fairly solid” and relatively lightweight, but, problematically, they were constructed from a material that was neither sufficiently breathable nor waterproof.

In 1869 Dr. Léon Le Fort designed a hospital tent specifically to remedy “certain defects peculiar to ‘la tente américaine [sic],’” but the French Society employed Le Fort’s model

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341 Evans, American Ambulance, 457; Branch, 152.
342 Evans, American Ambulance, 458.
343 Evans, American Ambulance, 462.
344 Evans, American Ambulance, 462.
345 Gordon, 53-54. At the time of the Franco-Prussian War, the French army possessed three different infantry tents that occasionally were used for the hospitalization of the sick, Evans, American Ambulance, 366. Additionally, a warehouse in Paris created a “surgeon’s tent” for the French Society. Crane was unclear about when this design was developed, as he indicated that the warehouse created the tent “quite recently” (the History of the American Ambulance was published in 1873), Evans, American Ambulance, 371-372. Even so, this “surgeon’s tent” had certain faults that prevented it from being an adequate field-hospital tent, namely, poor ventilation, a tendency to leak, and a lack of adaptability to non-surgical use, Evans, American Ambulance, 373-374.
346 Evans, American Ambulance, 366.
infrequently during the conflict.\textsuperscript{347} The tents constructed in accordance with Le Fort’s design “were destitute of a double roof, and the quality of the canvas made of flax was so inferior to that used by M. Le Fort in the construction of his own tents, as to greatly invalidate the conclusions drawn from their experimental use.”\textsuperscript{348} Notwithstanding this observation, Crane remained unconvinced of the superiority of Le Fort’s hospital tent. Presenting a balanced view, he noted that Le Fort’s model was an admirable structure; however, the framework was too complicated, and the hospital tent was unstable in windy climates.\textsuperscript{349} Crane concluded,

Entertaining the idea that the American tent could be improved, M. Le Fort has certainly succeeded in realizing his ideas, in so far as he may have produced a tent roomier and more accessible to the open air. He has...failed in so far as his tent is much heavier, much more costly, less secure when pitched, and more likely to get out of order.\textsuperscript{350}

Several barrack-hospitals were erected in Paris during the siege. Under the authority of the French army, Lévy directed the construction of barrack-hospitals in the Luxembourg Gardens and in the Jardin des Plantes, each with a capacity of approximately 440 patients. The Comité de la presse established a similar facility at Passy, and the French Society was in the process of building a barrack-hospital near the Palais de l’Industrie when the siege ended in late-January 1871.\textsuperscript{351}

Concerning tent-hospitals, the innovations with the American ambulance related to the preference for tents instead of more permanent structures and the continued use of tents in cold weather. In his letter to Colonel Moore, Crane wrote,

At the “American Ambulance [sic],” tents were employed for the first time in the history of war, as a shelter for wounded in the winter—not as a matter of necessity from the

\textsuperscript{347} Evans, American Ambulance, 371.  
\textsuperscript{348} Evans, American Ambulance, 401. For Le Fort’s own description of his tent, see, Evans, American Ambulance, 397-400.  
\textsuperscript{349} Evans, American Ambulance, 401-402.  
\textsuperscript{350} Evans, American Ambulance, 402.  
\textsuperscript{351} This information about the barrack-hospitals is from Evans, American Ambulance, 214-216. Francisque Sarcey stated that the Passy ambulance was completed at the end of December 1870, Paris during the Siege (London: Chapman and Hall, 1871), 217.
absence of...suitable hospital accommodations, but from the conviction that the tent system would not only furnish the best results, but that it was at the same time the most easily and economically organized (emphasis original). 352

Crane proposed that the American ambulance was the only medical facility established during the siege of Paris in which tents were used despite the availability of a sufficient number of houses or barracks. 353 While Crane’s own evidence seems to validate this claim, his declaration was not as explicit as it appeared. 354 Moreover, even if French hospital planners preferred tent-hospitals, the failure to prepare ambulance supplies—when combined with the unexpected circumstances of a siege—could negate this preference. Gordon emphasized the potential difficulties of setting up temporary hospitals during a siege: “It is obvious...that in a siege neither huts nor tents could be obtained in sufficient numbers to meet all the requirements, neither could sufficient space be afforded for their erection, nor men to construct them, where all were needed for purposes of defense.” 355

The grounds of the American ambulance reflected the Committee’s desire for a pleasant, bucolic environment, which was certainly conspicuous in the disorder and squalor of the siege.

352 Crane to Moore; these points are also made in Evans, American Ambulance, 478-479. Tents were obviously used to house the wounded during the American Civil War, but Crane only cited a single instance of tents functioning during the winter, in December 1862; however, the severe weather caused the patients to be transferred to nearby military hospitals, Evans, American Ambulance, 476. Crane argued, not completely convincingly, that in “several instances” small tent-hospitals had been erected in the United States during the winter, but these facilities “owed their existence either to the comparative mildness of the winter climate in a considerable portion of the country, or to the impossibility of obtaining...better shelter,” Evans, American Ambulance, 477.

353 Evans, American Ambulance, 466.

354 After the siege, a tent-hospital that was modeled after the American ambulance was assembled in the Luxembourg Gardens under the direction of a Dr. Depaul, Evans, American Ambulance, 466, n.1. Additionally, Le Fort built a tent-barrack, possessing “more characteristics peculiar to the tent than to the barrack,” as an annex to the Hospital Cochin in 1868, Evans, American Ambulance, 432; although Le Fort contended that his facility operated during the siege, Crane asserted that Le Fort’s temporary hospital closed in October 1870 as a result of the cold weather and was not reopened until after the siege. Evans, American Ambulance, 466, n. 1. Finally, a New York Times article recounting events from 22 August 1870 indicated that the Empress, in an attempt to restore the waning public approval of the Second Empire, oversaw the creation of a tent-hospital in a garden at the Tuileries palace, “Paris and the Invasion,” New York Times, 6 September 1870; the purpose of this ambulance was suspect though, as the report noted that Parisian commentators believed that “the locality is decidedly ‘theatrical.’” Outside the city, the French established a large tent-hospital at Metz, but this structure was intended to be a provisional facility only, its construction necessitated by a large influx of wounded, Evans, American Ambulance, 467.

355 Gordon, 58.
Evans described the facility’s appearance: “Its white tents, surmounted by the American, French, and International [Red Cross] flags, its beds of gay flowers, its orange and pomegranate bushes in green tubs, its little grove and scattered trees…made up a picture as inviting as the usual aspect of a hospital encampment is the reverse.” Pine trees and fir trees removed from the Bois de Boulogne were replanted on the ambulance grounds, and, according to Crane, the ambulance organizers “intended that our ambulance should always look bright and cheerful, not only to our occasional visitors, but to the wounded who might be the subjects of our care.”

The facility’s volunteers attempted to maintain a positive atmosphere within the American ambulance, and these efforts to foster high morale contributed to the success of the American service. As Evans explained, “The object of volunteer aid was to furnish those things which are most likely to be needed in pressing exigencies which, perhaps not absolutely indispensable, might contribute greatly to the comfort of the sick and the welfare of the army.”

While the ambulance possessed a cat, a dog, and several singing birds, the volunteers’ tent-barrack contained a salon outfitted with artwork, chairs, tables, and a piano. The ambulance personnel, patients, and visitors gathered in this room to talk, read newspapers and books, or play chess and other board games.

The American ambulance staff used treatment procedures during the siege of Paris that included: an organized wagon service for conveying the wounded; copious ventilation; proven, simple remedies; a clean environment; and a risky surgical technique. An analysis of these elements will demonstrate that, as was the case with the American hospital tents, the American

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357 Evans, *American Ambulance*, 514, 450. These transplanted evergreens were intended for appearance purposes only, and not, as ambulance visitors and certain historians have suggested, as a means of air purification, Evans, *American Ambulance*, 514; see, for example, Carson, 109, and Branch, 159.
359 Evans, *American Ambulance*, 38. Evans characterized the American ambulance as “an important social center, not only for the Americans [in Paris]…but for many foreign residents, who constantly dropped in to relieve the tedium of the time,” *American Ambulance*, 39.
ambulance benefitted more from efficient organization than from medical innovation. Indeed, the American ambulance produced medical results that were comparable to those obtained when tents were used as hospitals in the past.\textsuperscript{360}

The American ambulance’s wagon service for transporting the wounded was better prepared and more efficient than the transport services of the French-sponsored medical facilities. Consequently, wounded soldiers were conveyed more quickly and more comfortably, without aggravation to their injuries, in the American wagons. As Evans indicated, this transport system “had been especially prepared with reference to this object [of providing battlefield aid and transportation for injured soldiers].”\textsuperscript{361}

Directed by two squads of enthusiastic volunteers, the American wagon service contained ten or twelve ambulance wagons, stretchers, and “all the material necessary for the transport and care of the wounded.”\textsuperscript{362} The ambulance wagons were the models displayed at the 1867 Exposition, and these vehicles performed admirably during the siege. Evans boastfully stated that the American design was “so excellent, so well adapted to all the contingencies of wagon transportation” that the French Society requested an identical model.\textsuperscript{363} Furthermore, the American ambulance’s coffee wagon, used during the American Civil War and also exhibited in 1867, became a welcome sight to exhausted and wounded soldiers. Outfitted with containers for coffee, tea, and soup, the coffee wagon accompanied the American squads to the battlefields. Describing the morale-boosting effect of this portable refreshment stand, Evans stated that the

\textsuperscript{360} Evans, \textit{American Ambulance}, 479.
\textsuperscript{361} Evans, \textit{American Ambulance}, 36.
\textsuperscript{362} Evans, \textit{American Ambulance}, 36-37.
\textsuperscript{363} Evans, \textit{American Ambulance}, 73. Evans noted that the French service also adopted the American stretcher design, \textit{American Ambulance}, 74.
coffee wagon was “one of the most widely known and most eminently popular of the ‘properties’ of the American ambulance.”

Approximately thirty Americans in Paris volunteered for the ambulance squads—one group directed by Joseph K. Riggs, the other by William B. Bowles—whose duties consisted of removing the wounded from the battlefield, distributing supplies, and “all those duties which are usually discharged by an ambulance corps.” Evans and Swinburne each remarked that these volunteer squads were often the first ambulance-wagon teams to reach the battlefields around Paris. To eliminate a haphazard and rushed equipping of wagons in the event of a medical emergency, the ambulance wagons, stocked with the necessary supplies, remained in a state of readiness for a departure to the battlefield. Unlike many of the stretcher-bearers and volunteers in French ambulances, the American squad-personnel “were drilled in the art of carrying the wounded on stretchers, in placing them in and removing them from the ambulance wagons.” In contrast to the criticisms that many French surgeons leveled at their aides during the Franco-Prussian War, the volunteers in the American ambulance provided “a new and invaluable element of strength to the personnel [emphasis original] of the ambulance.”

The American ambulance’s founders evidently supported the then-popular belief, proven incorrect in the years after the Franco-Prussian War, that stagnant or foul air—“miasma”—caused postoperative infections. As was the case with the tent-hospitals, the American

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366 Evans, *American Ambulance*, 79, 590; Bowles also pointed this out, 173.

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ambulance’s developers were not acting without precedent in their convictions about the necessity of adequate ventilation within medical facilities. French scientists acknowledged the importance of ventilation in hospitals as early as the mid-1780s, when a committee appointed by the French Academy of Sciences reported on the options for preventing the unsanitary conditions that resulted from overcrowding in hospitals.370

Discussing the benefit of fresh air, Crane asserted that “the conditions under which the wounded were treated at our ambulance differed in no essential respect from those existing in the other ambulances at Paris, except in so far as the patients were more directly exposed to the influence of open air.”371 Although perhaps an overstatement, this remark highlights the premium that the American ambulance staff placed on proper ventilation. Due to the breathability of the covering, the tent-hospital design allowed constant, natural ventilation, and this important characteristic was thought to be the primary reason for the successful medical record of these facilities.372 Furthermore, the walls of the tents could be raised during mild weather, allowing the patients to recuperate in the open air. Crane intelligently concluded that, weather permitting, exposing patients to the open air “powerfully contributed to enable them to resist the depression occasioned by wounds, the want of suitable food, and the epidemic influence which for several months showed itself…in the enfeebled vitality and reduced powers of resistance exhibited by the whole population of Paris.”373

During cold portions of the year, the tent-hospital—unlike permanent medical facilities in buildings and barracks—maintained continuous ventilation without difficulty. As air easily

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370 Evans, American Ambulance, 190; the solutions tended to involve moving the patients farther from one another, and the conditions within French hospitals remained essentially the same until 1846, when the first “ventilating apparatus” was employed in the pavilion at the Hospital Beaujon, Evans, American Ambulance, 191.
371 Evans, American Ambulance, 190.
372 Evans, American Ambulance, 492.
373 Evans, American Ambulance, 494.
passed through the breathable canvas, the atmosphere within the tents was constantly renewed.\textsuperscript{374} At the American ambulance, coal- or wood-burning stoves placed in sheltered ditches piped warm, dry air into the tents via trenches, thus keeping the inside of the ambulance comfortable and helping to foster air movement.\textsuperscript{375} This heating system seems to have been one of the few innovations that the American ambulance displayed during the siege. Although Crane touted many of the techniques and structures of the American ambulance, he especially stressed the facility’s heating system:

I believe that a considerable part of the success attending the surgical treatment at our ambulances must be ascribed to conditions which could not have been maintained within the tent pavilions, had any of the usual modes of heating been adopted….I cannot therefore insist too strongly upon the special merits of our system of warming tents.\textsuperscript{376}

He also emphasized the uniqueness of the heating system’s design, arguing that “no system of heating has ever been proposed which may have contributed more powerfully to the abundant ventilation of the same, than did the system…which was used at our ambulance during the winter of 1870-71.”\textsuperscript{377} With the exception of the tent-hospital in the Luxembourg Gardens, which was a copy of the American ambulance, this statement appears accurate.

\textsuperscript{374} Crane indicated that the difference between the exterior atmosphere and the tents’ warmer interior atmosphere facilitated the renewal of air: “In the colder seasons, when it may be necessary to warm the tents, the air within them may be maintained even more consistently pure; since whenever the temperature of the air within a tent is raised to a degree above that of the air without, the air within the tent begins to escape, or rather is forced into the surrounding atmosphere, from which in turn it is necessarily renewed,” Evans, American Ambulance, 492.

\textsuperscript{375} This system of heating was a modification of a design that Crane first learned about in 1862 and later presented at the 1867 Paris Exposition, Evans, American Ambulance, 526-528. A dual system of heating was used to warm the tents: “The warm temperature within the pavilion was therefore maintained partly by the direct introduction of hot air [from the stoves], and partly by the evolution of radiant heat [from the trenches]; the air gave out its heat quickly; the earth gave up its heat slowly….Had our tents been warmed solely by the introduction of hot air, it would have been impossible to have maintained…a steady temperature,” Evans, American Ambulance, 535. For a detailed explanation of the American ambulance’s heating system, see, Evans, American Ambulance, 528-531, 534.

\textsuperscript{376} Evans, American Ambulance, 548. Crane also made this point in his letter to Colonel Moore, stating that the opportunity to use tents was “largely attributable to the special and peculiar means employed to maintain within them a comfortable and uniform temperature,” Crane to Moore.

\textsuperscript{377} Evans, American Ambulance, 544-545.
The stoves and covered trenches were designed to economize fuel and distribute heat evenly.\textsuperscript{378} As a result, “It was easy to maintain...a temperature within the tents comfortable and uniform in the coldest weather.”\textsuperscript{379} Statistics and contemporary testimony reinforced this claim, as, for example, one witness estimated that with an external temperature of 25 degrees Fahrenheit, the American tents sustained an interior temperature of 55 degrees Fahrenheit.\textsuperscript{380} Measuring the temperature at five different places within the ambulance tents when the external temperature was 29 degrees Fahrenheit, another observer calculated that the temperature within the tents averaged 58.4 degrees Fahrenheit, with calculations ranging from 55.5 degrees to 61 degrees Fahrenheit.\textsuperscript{381} An additional advantage of the American ambulance’s heating system was that the warm air-currents dried the surrounding earth as they passed through the trenches, rendering the atmosphere in the American tents less humid than in other tent-hospitals or permanent medical facilities. According to Crane, “The ground on which the tents stand will be found to have soon become so thoroughly deprived of its moisture as to cease to be a source of either danger or apprehension to anyone, whether patient or surgeon.”\textsuperscript{382}

The American ambulance, like the rest of Paris during the siege, suffered from the effects of fuel shortages in the winter months of 1870 and 1871. As the city’s supplies of coke, coal, and firewood were exhausted before December 1870, Paris’ leaders began issuing small quantities of coal-dust and green wood—the latter “almost as incombustible as the ice beneath

\begin{footnotes}
\item[378] Apparently, the construction of this heating system was a relatively simple procedure, as five or six men could complete the installation in a single day, Evans, \textit{American Ambulance}, 549.
\item[379] Evans, \textit{American Ambulance}, 531.
\item[380] Gordon, 54.
\item[381] Evans, \textit{American Ambulance}, 531-532; Crane pointed out that the temperature was usually around 60 degrees Fahrenheit, Evans, \textit{American Ambulance}, 532.
\item[382] Evans, \textit{American Ambulance}, 536.
\end{footnotes}
their [people’s] feet.”383 Near the end of December, the American ambulance began experiencing difficulties heating the tent pavilions, as the poorer-quality fuels burned inefficiently and hindered the ambulance’s ventilation system, causing smoke to enter the tents.384 Fortunately, the ambulance staff partially remedied this problem through a clever device installed in the piping beneath the tents that allowed condensation in these pipes to drain.385

The American ambulance’s medical personnel mainly used simple treatments whose dependability was established during the American Civil War. The medical staff preferred oakum instead of the more-common lint as a covering for wounds, as oakum “acted simultaneously as compress, disinfectant, absorbent, and deodorizer.”386 As Wangensteen and Wangensteen explain, “A time-honored application among sailors was oakum, produced by picking apart the old tarred flax or hemp rope of ships’ riggings.”387 Oakum was used as a dressing during the Civil War, and Joseph Lister reported that this material “had antiseptic qualities, and, except for the smell, made an advantageous covering for granulating sores after a washing with carbolic acid.”388 While oakum was employed more frequently in the Franco-Prussian War than in previous wars, Gordon noted that its use was “only a revival of a very old practice in naval surgery.”389 The ambulance personnel also relied on quinine and opium and

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383 Evans, American Ambulance, 504-505. Although typically supplied with more fuel than the city’s general population, the Parisian hospitals and ambulances “were nevertheless compelled to be rigidly economical” with their fuel rations, Evans, American Ambulance, 505.
384 Evans, American Ambulance, 532-533; at one point, the ambulance lacked fuel for a period of two days, Evans, American Ambulance, 667.
385 A more well-informed description of this remedy is found in Evans, American Ambulance, 533.
386 Evans, American Ambulance, 579.
388 Wangensteen and Wangensteen, 303.
389 Gordon, 127. When Gordon’s and the Wangensteens’ historical information is considered, it seems that Evans exaggerated in his claim about the American ambulance’s role in promoting this substance; he declared that the American ambulance “was largely instrumental in popularizing…the employment of oakum as a substitute for charpie [strands of linen cloth use for surgical dressings]. This substance [oakum], the virtues of which were previously practically unknown in France, found great favor among the hospital and ambulance surgeons of Paris in the treatment of suppurating wounds,” American Ambulance, 74.
used compresses of hot and cold water “to the exclusion of many of the usual applications.” Patients in the American ambulance used mattresses and pillows filled with moss or naturally antiseptic seaweed.

Although the facility’s doctors primarily relied on these basic remedies, some historians have failed to mention other treatments employed in the American ambulance. For example, Carson asserts that fresh air, opium, quinine, and hot and cold water were the only remedies used in the American ambulance, a statement that Christiansen also supports. Swinburne offered a more extensive catalog of remedies. According to his report, wounds were cleaned with diluted carbolic acid, diluted alcohol, or preparations of chlorine. Swinburne also provided a paragraph-sized list of other medicines and solutions, which included chloral for pain and restlessness, powdered alum to stop bleeding, and magnesium citrate as a laxative. Additionally, Gordon observed the ambulance’s extensive use of a weak solution of nitric acid and water.

The ambulance’s organizers also emphasized maintaining a sanitary environment within the tents and tent-barracks. Indeed, when Evans pinpointed the reasons for the success of the American ambulance, he cited “the immense importance of hygienic conditions as [a] means of

390 Evans, *American Ambulance*, 43; Swinburne elaborated on the use of warm-water compresses: “The wounded regions were covered with several folds of cloth, in the form of a compress, dipped in warm water. This was enveloped in some impermeable material, such as oil-cloth, cotton, or silk. In some instances, sheets of thin india-rubber…were used,” Evans, *American Ambulance*, 578.


392 Carson, 110; Rupert Christiansen, *Paris Babylon: The Story of the Paris Commune* (New York: Penguin Books, 1996), 193-194. In fairness, Francisque Sarcey, in his account of besieged Paris—a popular and useful resource for information on the city’s ambulances and hospitals—wrote that while visiting the American ambulance, Swinburne informed him that these remedies were the only recognized treatments, 218; Swinburne’s comment seems to have been more of a general statement intended to highlight the facility’s use of simple treatments than a comprehensive medical description.


394 Gordon, 125.
preventing disease and facilitating cures.”395 This emphasis on sanitation reflected the beliefs of miasma-theory advocates who “equated cleanliness with health and putrid smell with disease.”396

Soiled clothing and bedding were immediately replaced, and Crane insisted that dirty clothing was removed from the patient wards as soon as possible and that “linen that can be cleansed by washing should be…sent without delay [emphasis original] to the laundry.”397 Other used-materials were either burned in a designated furnace or buried in specially prepared trenches; Crane warned, “To dispose of any kind of refuse, in any other way than that especially provided [emphasis original] for it, was positively forbidden.”398 These hygienic measures contrasted sharply with the neglect of sanitation that observers noted in certain French-sponsored medical facilities. Writing about the occurrence of disease and infection during the siege, Gordon remarked that while the conditions of the war and the siege naturally worsened the sanitary environment in Paris, “It nevertheless appeared that in many instances the prevalence of…hospital diseases depended upon avoidable causes” such as unchanged bedding saturated with blood and discharges and dressings layered too thickly over wounds.399

The ambulance staff also used more-drastic sanitary measures. Periodically, the patients were removed from the tents and tent-barracks, and these structures were fumigated with chlorine gas. To complete the disinfecting process, the floorboards were pulled up, the ground cleaned and covered with iron sulfate, and the boards replaced.400

Dr. John Swinburne performed surgical procedures as the Surgeon-in-Chief of the American ambulance. Working as a surgeon during the American Civil War, Swinburne

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395 Evans, American Ambulance, 44; the other reasons were the preference of tents instead of solid buildings and the use of medical and surgical knowledge gained from the Civil War, American Ambulance, 44.
397 Evans, American Ambulance, 580, 559.
398 Evans, American Ambulance, 559.
399 Gordon, 193-194.
400 Evans, American Ambulance, 580.
possessed much experience in military medicine and in managing army hospitals. Recruited to replace Dr. Marion Sims when Sims left Paris with the Anglo-American ambulance, Swinburne arrived in the French capital from London on 7 September 1870. Instead of relying exclusively on amputation as the surgical treatment for damaged limbs, Swinburne favored conservative surgery, a procedure in which parts of bones or tissues were removed, “Leaving sufficient periosteum [the fibrous membrane that surrounds bones] behind for healing to take place.” The surgeon then placed the injured limb in a device that allowed the appendage to heal in its original shape.

The aligning of conservative surgery circa 1870 with medical innovation is not completely accurate. This surgical technique was, in one historian’s opinion, “The most contested practice of the war.” Although amputation and conservative surgery both were common during the Franco-Prussian War, conservative surgery “was later associated with Listerian antiseptic practice,” and amputation was identified with a “collection of embarrassing butchers.” Taithe explains, “Medically speaking, the victory of conservative surgery was principally retroactive and historiographical in the 1880s and 1890s.”

In 1870 conservative surgery was neither a new medical practice nor a definitively superior technique. The phrase “conservative surgery” first appeared in 1853, as “more thoughtful surgeons” became increasingly troubled by the manner in which certain doctors and

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401 Evans, *American Ambulance*, 78; Branch, 158.
404 Taithe, *Defeated Flesh*, 23. Taithe suggests that the debates about this practice included “a number of radical choices on the risk, rationality and purpose of a long and difficult treatment which did not often involve antisepsis,” *Defeated Flesh*, 23. The question could be stated as follows: “Should one cut swiftly through the flesh and amputate a damaged limb before any infection sets in, or should one practice conservative surgery?” Taithe, *Defeated Flesh*, 182.
405 Taithe, *Defeated Flesh*, 183.
medical students were taking advantage of “the potential drama of major surgical intervention rather than practicing careful conservation.”407 Additionally, Swinburne noted that the treatment for compound fractures used at the American ambulance was essentially the same procedure outlined in his February 1863 surgical report to the Medical Society of the State of New York.408

Conservation was not a definitively superior surgical method in 1870, as this practice was a still-developing technique whose success often depended upon the availability of medical resources and a sanitary environment. During the Franco-Prussian War, the treatments for gunshot wounds varied significantly from hospital to hospital, and, as Jean de Blonay points out, “There were defenders and opponents of antisepsis, of early amputation, of conservative treatments, of ether, of chloroform.”409 Besides Swinburne, proponents of the conservative technique included surgeons at the Corps Légitatif ambulance, the ambulance at the École des ponts et chausses, and the Ambulance de la Marine.410

Gordon observed that the results for conservative surgery were often as poor as those for primary amputations.411 Discussing the use of this method during the Franco-Prussian War, Gordon was pessimistic: “Although in some rare instances, it has unquestionably been followed by favorable results [such as at the American ambulance]…, the general conclusion arrived at is the reverse of flattering in regards to its suitability under such circumstances as a substitute for operation.” He concluded that conservative surgery was preferable only in certain settings,

407 Brieger, 219-220.
408 Evans, American Ambulance, 581.
409 Gordon, 122; Jean de Blonay, 1870: une révolution chirurgicale: les origines et le développement de la chirurgie civile et militaire moderne (Vevey: Éditions Delta, 1976), 86.
410 Gordon, 190.
411 Gordon, 190; as an example, Gordon reported that the ambulance at École des ponts et chausses experienced 20 deaths out of 28 cases in which the conservative technique was used, 190-191.
namely, “Stationary hospitals, well situated, well provided with mechanism, and with skilled attendants in sufficient number.”

As the Service de santé and the French Society were unprepared for the conflict, the French ambulances were unlikely to provide the necessary sanitary conditions in which infection could be minimized and conservative surgery could succeed. Blonay supports this argument, asserting that in 1870, “The conservative treatment had gained ground in Europe…but the means to succeed remained insufficient. The French were certainly the least fortunate in this domain, because it is often the deficiency of an evacuation service that forced them to amputate limbs that early treatments would have been able to save.”

While some contemporaries were not particularly impressed with the American ambulance, an overwhelming majority of eyewitnesses commented favorably on this service, as the following section indicates. A comparison of the medical and surgical statistics from the American ambulance with those from other Parisian ambulances and hospitals provides evidence of the contrast between the success of the American service and the poorer results in other medical facilities during the siege.

Observers frequently applauded the American ambulance’s tents and wagons, organization, clean environment, and medical success. For example, Felix Whitehurst wrote, “The whole of the American arrangements are admirable, and especially should be mentioned their wagons, which carry four wounded in perfect comfort.” Whitehurst also remarked that in cold weather, the American tents “were as warm as a library,” and Cameron J.F. Stuart

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412 Gordon, 191.
413 Blonay, 123.
414 Felix Whitehurst, My Private Diary during the Siege of Paris (London: Tinsley Brothers, 1875), 1:220
Macdowall noted that the tents remained dry during a period of very heavy rain. Additionally, Nathan Sheppard described the ambulance’s “neat and tasteful grounds, its ample and well ventilated [sic] hospital tents, and above all, the skill of Surgeon Swinburne, and the energy and fidelity of his fellow-workers [sic].” While Elihu Washburne, the United States Minister to France, believed that the American ambulance was superior to any French army ambulance, Hoffman stated that the American ambulance demonstrated “order, system, and discipline,” and performed “better work than any of the other ambulance[s] in Paris.” Supporting Hoffman’s assessment, Thomas Gibson Bowles maintained that the American service was the only medical facility in Paris that “does its work in a business-like manner.”

French eyewitnesses also marveled at the achievements of the American aid-facility. In his history of the American ambulance, Evans filled approximately twenty-eight pages with examples of the Parisian press’ and medical experts’ admiration for the American service. For instance, an article from the Journal Officiel de la République Française praised the American ambulance’s system of heating, ambulance wagons, and treatment methods. Besides Evans’ collection of accolades, other sources reflected the French approval of the American ambulance. Sarcey portrayed the American hospital grounds as “very attractive, like that of an encampment in the midst of a forest.” On 21 September 1870 Washburne wrote that Surgeon-in-Chief Hippolyte Larrey visited the American ambulance and gave “the highest kind of compliment to

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415 Whitehurst, 2:107; Cameron J.F. Stuart Macdowall, On a New Method of Treating Wounds, (Gruby’s System) and the Medical and Surgical Aspects of the Siege of Paris; Outlines for a Non-Official Report to the Physician Rt. Hon. the Minister of State for India (London: J. and A. Churchill, 1871), 13.
416 Nathan Sheppard, Shut Up in Paris (London: Richard Bentley and Son, 1871), 266.
417 E.B. Washburne, Recollections of a Minister to France, 1869-1877 (New York: Charles Scribner’s Sons, 1889), 1:144; Hoffman, 222.
418 Thomas Gibson Bowles, The Defence of Paris: Narrated as It was Seen (London: Sampson Low, Son, and Marston, 1871), 172.
419 Evans, American Ambulance, 48-52.
420 Sarcey, 217.
that institution.”⁴²¹ Additionally, Auguste Cochin observed that the American facility possessed the advantages of being “well ventilated, and accordingly very healthy, and particularly favorable to surgical operations.”⁴²²

The reviews of the ambulance were not, however, uniformly positive. Cochin believed that the American ambulance would be uncomfortable to inhabit for an extended period due to the likelihood that the tents would gather dust easily.⁴²³ Although he touted the ambulance’s external appearance and cleanliness, Sarcey suggested that “the naked austerity of the American ambulance may possibly be too depressing for us.” He also preferred that stoves be placed inside ambulances—so that patients could gather around them and talk—instead of the American heating system, which “had the disadvantage of making men melancholy, because they could find no place to talk or to read their newspapers.”⁴²⁴ Sarcey did not give credit to the American ambulance’s founders for developing a system of simple treatment options:

> In fact, this was a concise application of the ideas emitted by M. Chenu in his book on the Crimean War, and, earlier, by Michel Levy [sic] in his great work on the hygiene of hospitals. This system, though turned to practical account by others, had been invented and advocated by ourselves; yet, when we saw it in work, we were lost in astonishment and admiration.⁴²⁵

A comparison of the mortality rates from the American ambulance with those from certain other French-sponsored medical facilities highlights the surgical success of the American ambulance and reflects the stark contrast between the two services. Generally, surgical results were very poor during the siege of Paris.⁴²⁶ As an example, Auguste Nélaton, who assisted with

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⁴²¹ Washburne, Recollections, 1:144.
⁴²² Auguste Cochin, Le service de santé des Armées avant et pendant le siège de Paris (Paris: A. Sauton, 1871), 66.
⁴²³ Cochin, 66.
⁴²⁴ Sarcey, 220.
⁴²⁵ Sarcey, 218. These comments raise questions, namely, why the French exhibited such surprise upon viewing a system that they had developed years before. Even so, Sarcey’s remarks lend support to the idea that the American ambulance relied more on the effective organization of tested methods than on medical innovation.
⁴²⁶ Wangensteen and Wangensteen, 513; Gordon, 181.
operations at the Grand Hôtel, had recorded a mortality rate of less than 4 percent in elective surgeries in 1864 but counted seventy deaths following seventy amputations at this temporary hospital during the siege.  Similarly, Macdowall recounted hearing a Dr. Demarquay, “One of the best operators I have ever seen, and a most distinguished man of science,” lament that he had performed no successful amputations at the Passy barrack-hospital.

The Grand Hôtel seemed to have some of the worst surgical results, with four deaths in seven amputations at the thigh and an overall mortality rate of around 45 percent. The primary ambulance of the Comité de la presse—located at the École des ponts et chausées and moved to the barrack-hospital at Passy in February 1871 due to a sharp increase in the number of deaths—experienced 62 deaths out of 278 cases, a 22 percent mortality rate, and the Ambulance de la Marine suffered a mortality rate of approximately 25 percent.

The American ambulance produced better surgical results. From the beginning of the siege in September until 30 November, two patients died out of more than sixty treated at this facility, a mortality rate of approximately 3.3 percent. After this date, the shortages in fuel and food negatively affected the performance of the American ambulance in the same manner as in other Parisian ambulances and hospitals. In total, the American ambulance treated 247 surgical cases with 47 deaths, a mortality rate of about 19 percent. As Crane boasted,

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427 Wangensteen and Wangensteen, 513.
428 Macdowall, 12.
429 Evans, American Ambulance, 43.
430 Gordon, 47-48, 120-121; Crane provided slightly different statistics for this facility: 63 deaths out of 281 wounded, Evans, American Ambulance, 488.
431 Evans, American Ambulance, 589; Swinburne claimed that each of these deaths was an “accidental loss…from tetanus,” Evans, American Ambulance, 592.
432 According to Crane, “It is fortunate that we are seldom called upon to treat either the sick or the wounded under circumstances so painful. We were forced to see large numbers of persons die after wounds not usually considered dangerous; and the deaths occurred frequently even after the wounds had nearly or quite healed,” Evans, American Ambulance, 509. For a list showing how the deteriorating environment affected other Parisian medical facilities, see, Evans, American Ambulance, 482, n. 1.
433 Evans, American Ambulance, 679.
“Certainly no better results were obtained elsewhere in Paris.”\textsuperscript{434} For thigh fractures resulting from gunshots, Swinburne performed seven amputations and reported four deaths; the surgeon successfully treated three additional thigh fractures with the conservative technique.\textsuperscript{435} Swinburne emphasized two points concerning the ambulance’s injured patients: the wounded “were brought to us directly from the battle-field [\textit{sic}], or had received temporary surgical attention only, prior to their transportation,” and the wagon squads “made it a point to seek and take in the most severely wounded, and particularly those having fractures.”\textsuperscript{436}

The statistics for the various Parisian medical facilities are not always as straightforward as they appear. While the Rothschild ambulance recorded a mortality rate of 17.9 percent, for instance, the facility treated a relatively small number of patients, and the injuries were not usually severe.\textsuperscript{437} Asserting that “mortality rates based on a month’s experience at an ambulance are evidently worthless,” Crane explained that the statistics from the American ambulance were important because the information reflected the complete treatment of the wounded; the facility neither received patients from other ambulances nor sent patients to other ambulances, or, as Crane stated bluntly, “Those who left our ambulance left it either cured or dead.”\textsuperscript{438} As the example of the transfer of wounded from the École des ponts et chaussées to Passy demonstrates, certain medical facilities moved patients before they had made a full recovery. Even if the connection was unintentional, these transfers positively affected the morality statistics. For example, the Corps Législatif ambulance reported 21 deaths out of 136 patients, a mortality rate of about 15.4 percent, which was markedly lower than at the American ambulance. To account

\textsuperscript{434} Evans, \textit{American Ambulance}, 479.
\textsuperscript{435} Evans, \textit{American Ambulance}, 606; Swinburne noted that none of the seven amputations could have been treated conservatively, \textit{American Ambulance}, 606.
\textsuperscript{436} Evans, \textit{American Ambulance}, 590.
\textsuperscript{437} Evans, \textit{American Ambulance}, 486-487.
\textsuperscript{438} Evans, \textit{American Ambulance}, 483, 486.
for this lower figure, Crane insisted that almost the entirety of the 115 other patients “were simply transferred in a condition of more or less complete convalescence to some one of the numerous ambulances of Paris.”\textsuperscript{439} Similarly, the Italian ambulance produced seemingly remarkable results, counting only 2 deaths out of 200 patients, but Macdowall pointed out that this facility “conveyed immense numbers of sick and wounded to other [emphasis original] hospitals and ambulances.”\textsuperscript{440}

This reevaluation of statistics also tarnishes—but does not discredit—the highly touted medical results at the American Ambulance. To assist Swinburne in surgery and to treat the ambulance’s sick patients, Evans recruited Dr. William E. Johnston, a well-known American physician in Paris.\textsuperscript{441} Among the twenty-four patients that Johnston treated from 20 September 1870 until February 1871, seven perished, a mortality rate of approximately 29 percent.\textsuperscript{442} Compared to the attention that Swinburne, Evans, and Crane placed on the American ambulance’s surgical results, these statistics appear almost as an afterthought, as they are not discussed until the last page before the appendix in Evans’ history. While the American ambulance thus seemed to produce the best surgical results in Paris, this facility was not able to treat infirmed patients as effectively.

This analysis of the American ambulance has shown that this service was the most highly acclaimed medical facility in Paris during the siege, presumably due to the contrast it provided to the city’s other ambulances and hospitals. With a plan of action and precedents from the American Civil War, the developers of the American ambulance prepared a clean and aesthetically pleasing tent-hospital that was better organized, more efficient, and more successful

\textsuperscript{439} Evans, \textit{American Ambulance}, 485; Macdowall calculated 20 deaths out of 200 cases at this ambulance, a 10 percent mortality rate, 15.  
\textsuperscript{440} Macdowall, 15.  
\textsuperscript{441} Evans, \textit{American Ambulance}, 78; Branch, 158.  
\textsuperscript{442} Evans, \textit{American Ambulance}, 687.
in treating surgical cases than the majority of Parisian medical facilities. While this American service did represent innovation by employing a tent-hospital as the preferred method of housing the wounded even in cold weather, the American ambulance benefitted primarily from what the French-sponsored medical services fundamentally lacked: the efficient organization of facilities and treatments.
AFTERWORD- POSTWAR REFORMS IN FRANCE AND THE LIMITED INFLUENCE OF THE AMERICAN AMBULANCE

The historical significance of Dr. Thomas Evans’ ambulance is that it exemplifies the deficiencies—and the wartime consequences of these deficiencies—of certain organizations that France’s government targeted in the years of reform following the Franco-Prussian War. The French recognized the American ambulance’s contribution in the months immediately after the conflict, but in the wake of a major defeat that seemed to indicate a crisis of national decline, France’s leaders looked to triumphant Germany as they struggled to restructure France’s military and civilian aid-services. While the American ambulance was perhaps the most highly acclaimed medical facility of the Franco-Prussian War, this temporary hospital’s long-term medical influence was limited. Reflecting the fact that the American ambulance’s success primarily depended on an efficient organization that contrasted to France’s medical failures, the American facility’s medical results did not arouse much interest within the medical community in the United States in the years immediately after the Franco-Prussian War. Moreover, during the remainder of the nineteenth century, developments in the understanding of germs and technological innovations rendered the American ambulance’s discoveries obsolete before the First World War in 1914.

The crushing defeat in the Franco-Prussian War brought pressing concerns to the attention of the entire French nation. Karine Varley explains the impact of the defeat:

While France had suffered defeats before, that of 1870-1871 seemed greater in magnitude and significance because unlike earlier in the century, the army had collapsed under the weight of only one military power. The indifference of elements of the population towards the war effort, the indiscipline of the many soldiers, the defeatism of some

443 Addressing the Academy of Sciences in June 1871, Hippolyte Larrey, Surgeon-in-Chief of the Army of Paris during the siege, declared that the experience of the American ambulance demonstrated the usefulness of tents and tent-barracks, Thomas W. Evans, History of the American Ambulance Established in Paris during the Siege of 1870-71, Together with the Details of Its Methods and Its Works (London: Sampson Low, Marston, Low, and Searle: 1873), 71. This declaration, however, does not seem to have been followed by any drastic actions.
generals, the political disunity in the face of the enemy, and of course the Commune and civil war that followed, led many intellectuals to observe that the cause of the defeat lay much deeper than mere ill-preparation for conflict.\textsuperscript{444}

In what George Weisz describes as an “atmosphere of intellectual and political crisis” in France after the war, academics and the public questioned many of the nation’s institutions.\textsuperscript{445} French science and the French military were specific areas of concern, and, as Allan Mitchell indicates, “It was Germany that France needed to rival in order to recover its intellectual as well as military status in Europe.”\textsuperscript{446}

Following the humiliating defeat to Prussia and its German allies, the Third Republic’s leaders searched for ways to reassert France’s strength as a scientific and educational center. Scientists such as Louis Pasteur contended that the German universities defeated France in the Franco-Prussian War.\textsuperscript{447} Mitchell argues that the German example was the standard for reform for every level of France’s system of education through the early 1890s.\textsuperscript{448} France was not alone in its recognition of the apparent superiority of German educational facilities: “Beginning in the 1870s, more and more nations created new universities or reorganized older ones in an effort to match Germany’s achievements.”\textsuperscript{449} Bertrand Taithe offers a different interpretation, suggesting that France experienced “a backlash against all things German” after the defeat in 1870,

\textsuperscript{444} Karine Varley, \textit{Under the Shadow of Defeat: The War of 1870-71 in French Memory} (Basingstoke: Palgrave Macmillan, 2008), 44.
\textsuperscript{447} Thomas Neville Bonner, \textit{Becoming a Physician: Medical Education in Britain, France, Germany, and the United States, 1750-1945} (New York: Oxford University Press, 1995), 253. Remarks such as Pasteur’s were not completely accurate; addressing scientists’ claims that the Prussian triumph was a result of better educational resources, Crosland writes, “The argument is suspect. It was, however, a useful line to take in France after 1870 to increase the financial support of science by the French government,” Maurice Crosland, “Science and the Franco-Prussian War,” \textit{Social Studies of Science} 6, no. 2 (May 1976): 186.
\textsuperscript{448} Mitchell, \textit{Victors and Vanquished}, 218.
\textsuperscript{449} Bonner, 288.
especially in the realm of medicine. Instead of resulting in a willingness in France to imitate German medicine and science, the conflict led to “a more dogmatic national medicine.” Both interpretations are convincing, yet what is most important for the current work is that after the war, France was focused on Germany, whether in imitation or in opposition.

The French government reexamined the Service de santé after the Franco-Prussian War. The American ambulance’s experience revealed the disorganization of the French army medical corps, but the German military medical service provided a more obvious foil to the poor performance of the Service de santé. As John Hutchinson explains, “The first of these lessons [from the war]…concerned the excellence of the military medical organization of the German army.” In a striking resemblance to the current study’s argument about what differentiated the American ambulance from the French medical facilities, contemporaries reasoned that the apparent superiority of German army medicine related to its organization, coherent command structure, emphasis on illness-prevention and treatment, and trained stretcher-bearers. Over the next ten years after the conflict, each of the major powers in Europe instituted reforms in the structure of military medicine that were influenced by the German example.

In 1880 Dr. Henri Marmottan addressed France’s Chamber of Deputies and advocated for the reform of the Service de santé. Blaming the Intendance for the ineptitude of the army medical corps during the Franco-Prussian War, Marmottan proposed the reorganization of the

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453 Hutchinson, 126.
454 Hutchinson, 126. In 1878 the French government began to consider restructuring the army medical corps on the German model, Mitchell, Victors and Vanquished, 79.
Service de santé into a special unit, similar to the artillery or the engineering corps, that would have a fixed position in the military hierarchy and would be accountable only to the army’s commander. Two years later, France passed a law that restructured the military medical service as “one of the main groups compromising the administration of the army and…its ambulance and hospital directors (all of whom were to be medical men) [would] have full authority over military and civilian personnel operating within their sphere. Henceforth, relations with the intendance [sic] were to be primarily financial.”

French leaders continued to reform the army medical corps through the 1880s. In March 1889 a new army medical school opened in Lyon to replace the Strasbourg facility—which was in German territory as a result France’s defeat in 1870—and four months later the Service de santé was released from any obligations to the Intendance. With these final measures, the army medical service “acquired the fundamental attributes it needed to ‘catch up’ with the sanitation services of its competitors….By 1914 the medical arrangements of the French would be roughly on the same level as that of the other major armies of Europe.”

As was the case with the relationship between Germany’s and France’s military medical organizations, the German voluntary aid service was an obvious foil to the French Society during the war: “In complete contrast to the shambles on the French side was the careful organization of medical and charitable assistance on the German side.” Hutchinson continues,

The enviable record of the Prussians naturally lent retrospective legitimacy to the decision taken in 1869 to entrust combat ambulance work to the military medical service

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456 Ellis, 201.
458 McAllister, 108.
459 Hutchinson, 117.
while severely restricting the role of voluntary assistance. Baldly stated, the Prussians had first removed the would-be “delegates of humanity” from the battlefield to the rear and then demonstrated that these new arrangements left the sick and wounded better off than in any previous war.460

The German example influenced the French Society. Most French army surgeons favored a restructuring of the country’s aid society along the lines of the German system of regulation of the organization’s activities and subordination to the army medical service.461 During the Paris Exposition of 1878, several leaders from the Paris Academy of Medicine hosted the “International Congress on Medical Services for Armies in the Field.” The participants approved a resolution that advised the subordinating of aid-society workers to the authority of the chief military physicians, the limiting of societies’ actions to supplying the medical corps, and the placing of aid personnel in permanent hospitals only.462 John S. Haller adds that the French legislation of the 1880s determined the French Society’s wartime relationship with the army and “directed its scope of activity in the distribution of support, assisting in transport, establishing hospitals, and, in general, affecting all medical service provided behind the war zone.”463

While Germany and the numerous issues associated with the defeat occupied the French government and French military leaders in the years after 1870, the American ambulance’s experience did not have the long-term medical impact for which the facility’s developers had hoped. In the preface to his history of the American ambulance, Evans wrote, “As an expression of modern sanitary science…it [the American ambulance] has been chiefly valued, and probably will be longest remembered, by all.”464 Likewise, Dr. Edward Crane believed that “the

460 Hutchinson, 126-127.
461 Hutchinson, 148.
462 Hutchinson, 149.
464 Evans, American Ambulance, xi.
experiment in its relations to military surgery was certainly one of the most important which has ever been made."\textsuperscript{465}

Reflecting the fact that the American ambulance’s success primarily depended on an efficient organization that contrasted to France’s medical failures, the American facility’s medical results did not arouse much interest within the medical community in the United States in the years immediately after the Franco-Prussian War. In 1874 a \textit{New York Medical Journal} review of Evans’ history claimed that most of the information was “of very small practical value to the general practitioner.”\textsuperscript{466} The reviewer suggested that the book could have been a useful reference work had it not been so voluminous, but concluded, “Inasmuch as there were only two hundred and forty-seven surgical and twenty-four medical cases treated in the ‘Ambulance,’ during the siege, the work may be considered rather pretentious.”\textsuperscript{467} In a similar vein, another reviewer criticized Evans’ section of the work as “one of the most lamentable displays of vanity and self-glorification which we have ever met with.”\textsuperscript{468} This writer also contended that the total number of cases treated in the American ambulance was small, especially when compared with the amount of printed space devoted to the subject.\textsuperscript{469}

Beginning in the late 1870s, advances in medical understanding and technology negated many of the immediate postwar improvements related to the medical experiences of the Franco-Prussian War. For example, Jean de Blonay indicates that the generally better surgical results in

\textsuperscript{465} Evans, \textit{American Ambulance}, 549.
\textsuperscript{467} Review, \textit{New York Medical Journal}, 643-644; this comment seems to fit Evans’ arrogant personality. The reviewer considered Swinburne’s report “the most practical of any thing in the book,” 644.
\textsuperscript{469} Review, \textit{The American Journal of the Medical Sciences}, 521-522; this commentator applauded Crane for presenting a well-written account of the history of military hospitals, 521.
smaller, less-crowded ambulances validated Florence Nightingale’s belief in the importance of spreading out hospital patients in well-ventilated pavilions; like the founders of the American ambulance, Nightingale accepted the theory that stagnant, foul air caused disease. As a result of this validation, an increased significance was placed on arranging patients in airy pavilions instead of crowding them into multi-story hospitals.  

This trend was short lived though. By the time the new St. Thomas’ Hospital—a pavilion facility for which Nightingale had lobbied—opened in London in 1871, “The epidemiological ideas that had made the pavilion so attractive were being undermined.” In the late 1870s the understanding of bacteria improved. Louis Pasteur wrote about putrefaction in 1863, but it was during this later period “when his work on surgical infection acquired its full intensity and began to have practical meaning for surgery.” The Wangensteens add, “With proof of the pathogenicity of bacteria established by Koch (1878), there began a deemphasis [sic] upon hospital ventilation and a definite swing from the pavilion type of hospital of the Crimean War and American Civil War to the more economical multiple-story structure.”

Marcel Guivarc’h argues that the aggregate battlefield experiences of French and German physicians “led toward the isolation of the contagious, the feverish, [and] the infected, and prepared for the acceptance of the works of Pasteur,” but he does not provide much evidence to support this claim that these surgical experiences steered medicine toward a better understanding

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of germ theory.\textsuperscript{474} W.F. Bynum points out that the germ theory that ultimately prevailed “was only one of many such theories put forth on the role of microorganisms in the cause of disease, and even so, the relationships between hosts and parasites turned out to be far more complicated than the early pioneers believed.”\textsuperscript{475}

From the improvements in ambulance wagon designs in the 1860s, technological developments in medical evacuation equipment accelerated after the Franco-Prussian War. These advances were spurred by “the arms race among the great powers” that hastened considerably in the last decades of the nineteenth century: “Railways, electricity, and machinery had been seized upon with advantage by the warmakers \textit{sic}; they were taken up with equal enthusiasm by the leaders of the aid societies.”\textsuperscript{476} Prussia displayed an efficient railway system for medical evacuation during the Franco-Prussian War, and the result was,

The proliferation during the 1870s of designs for hospital railway cars and designs for stretchers that could be placed easily and smoothly inside these cars without disturbing the wounded or interfering with the free passage of medical attendants. All kinds of winches and hoists were employed, both to remove the wounded from ambulance wagons and to put them inside evacuation trains. This emphasis on rapid evacuation was in keeping with the Prussian army’s insistence that aid society personnel and ambulances be kept away from the battlefield, but the inventiveness of the age was also directed at providing more efficient assistance on the battlefield itself, thanks to Baron Mundy’s [head of the Austrian aid society] promotion of mobile electric searchlights for philanthropic purposes.\textsuperscript{477}

Before the First World War, the development of motorized medical transport decreased the need for efficient horse-drawn ambulance wagons.\textsuperscript{478}

\textsuperscript{475} Bynum, 124.
\textsuperscript{476} Hutchinson, 165-166.
\textsuperscript{477} Hutchinson, 166. Baron Mundy played a major role in the Austrian organization’s commitment to improving ambulance transport, and several of his inventions were exhibited at the 1878 Paris Exposition, Hutchinson, 166.
\textsuperscript{478} “Although certain armchair critics doubted the reliability of motorized transport and persisted in advocating animal-drawn conveyances, motor vehicles quickly demonstrated their value in the movement of men, supplies, and ammunition in the Great War”; during this conflict, horse-drawn wagons could not endure the greater
While the American ambulance did not directly serve as the model for the reforms of France’s civilian and military aid-services in the years after the Franco-Prussian War, an assessment of why the American ambulance was frequently praised illustrates the deficiencies within these French organizations and provides a telling example of why the French Society and the *Service de santé* needed to be restructured following the Franco-Prussian War.

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distances between the frontlines and the rear and “still deliver wounded to hospital bases within a reasonable time,” Haller, 163, 167.
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