Gallows Humor, Sacred Conscience: The Ethics of Medical Experiments on Conscientious Objectors in WWII

by Andrew P. Schmitz

"I am willing to die in serving my Country—I am not willing to kill for it."[1] This case study of religious conscientious objectors from World War II documents a fascinating relationship between civilian leadership and military institutions. The work of Professor Sydney Halpern unearthed these gripping depictions, documented in her 2021 book *Dangerous Medicine*[2] and in her upcoming 2026 work *Infected for Science*. Large-scale combat operations catalyze ethical trade-offs. Compromises that could have otherwise lain dormant are suddenly forced onto the table of military necessity. Such was the case in World War II, when the American military needed to commit to a total-war approach in order to decisively win in the European and Pacific contests. During this crisis, the needed size of the military quickly outstripped the number of volunteers required to fill its ranks. Civilian policymakers had a dilemma to negotiate: whether and how to implement the draft to shore up the number of Soldiers needed to fight and win the nation's war. One consideration for the candidacy of draftees was what to do with those who held sincere religious beliefs that precluded them from military service. David Miller and his Quaker cohorts were such examples of conscientious objectors. However, David Miller's conscience precluded him from serving in the military, not serving the military. Miller and his fellows volunteered for an alternative form of service: to be the subjects of experiments by military medical researchers that would purportedly produce results that would help the warfighter on the front lines a hemisphere away.

This paper argues that military leaders should draw lessons from this civil-military relations case study to strengthen preparedness for competition, crisis, and armed conflict, especially under the demands of large-scale combat operations that may require conscription. This argument unfolds in two movements. First, most of the paper examines the historical record surrounding the case study, including conflicting media depictions of the experiments and David Miller's recently discovered autobiographical comics. Second, the paper analyzes the ethical stakes of the civil-military collaboration that sought to shape the American will to fight while neglecting the long-term duty of care owed to research subjects.

Historical Overview

Over the course of thirty years, from 1942 to 1972, American biomedical researchers deliberately infected more than 3,700 men and women with hepatitis.[3] Research scientists conducted these studies to better understand the pathology of this liver disease and to identify potential cures. The presenting symptoms included nausea, diarrhea, abdominal pain, exhaustion, fever, and, in some cases, jaundice. During this period, modern research-ethics standards and participant protections did not yet exist. As a result, researchers used questionable methods and kept poor records. For example, midcentury researchers infected prisoners, impaired children, and other disadvantaged groups with hepatitis, ostensibly for the greater good.

It was precisely this enthusiasm for the greater good that both galvanized the American will to fight and incentivized government officials during World War II to curate and perpetuate that will, no matter the cost. So, when the largest single-source outbreak of hepatitis B confronted the U.S. military in 1942, conditions were ideally set for research scientists to find a solution. The Secretary of War at the time, Henry Stimson, acknowledged to the press that 28,500 servicemen had contracted hepatitis and that 62 had died by July 1942. By the end of the same year, more than 50,000 personnel were hospitalized with jaundice, out of an estimated 300,000 infected overall.

One might well wonder how this disease was able to become so pervasive, so quickly, in America's fighting force. It was not, however, through the natural pathological pathways of unprotected sex, the sharing of needles, or even a nefarious plot by the Axis powers. Instead, it came through an unintentional blunder by the War Department. The mandatory yellow fever vaccine required of all servicemembers was, it turns out, infected with hepatitis. Partly as a prophylactic measure against Japan possibly weaponizing yellow fever as a biological weapon, the War Department had ordered all servicemembers inoculated. The result was a widespread, self-imposed pandemic, such that Stanhope Bayne-Jones, second in authority in the Office of the Surgeon General's Preventive Medicine Division, observed that the Battle of Midway was fought, and won, by "air pilots some of whom were suffering from hepatitis."[4]

In response to this threat, and to the broader danger of communicable disease, which in previous wars claimed more Soldiers' lives than battlefield injuries, the Roosevelt administration embarked on a novel civil-military professional relationship. By creating the Office of Scientific Research and Development, it funded university scientists in support of a wide range of medical studies. These agencies worked closely with the Army Epidemiology Board to improve control of infectious diseases affecting military personnel. Having learned lessons from the previous World War, when the 1918 influenza pandemic sickened an estimated 20 to 40 percent of America's military and caused tens of thousands of deaths, these organizations sought to study and treat the diseases afflicting servicemembers. Together, civilian researchers and military physicians in these institutions formed a civilian-military biomedical elite. These trusted professionals were responsible for virtually all of America's hepatitis infection experiments.

> Immunization was the military's primary strategy for controlling infectious diseases among soldiers. Before the war started, recruits routinely received vaccinations against smallpox, typhoid, and paratyphoid. By war's end, the armed services had added immunizations for influenza, tetanus, B encephalitis, and yellow fever. The yellow fever vaccine was by far the most problematic and its initial, ill-advised adoption would have the most far-reaching consequences.[5]

This crisis met a critical military need because the Army's own yellow fever vaccination program had helped cause the serum-induced hepatitis outbreak. The outbreak created a public-relations nightmare for the Army, despite the War Department's efforts to suppress the story. Nevertheless, news spread that both draftees and volunteers had suffered because of failures within the Office of the Surgeon General. In response, the War Department made clear to that office that it would tolerate no further public-relations failures. This meant that the civilian-military network of biomedical elites bore responsibility not only for restoring the fighting force's medical readiness, but also for shaping the narrative presented to the American public. That dual task forms the fulcrum of the first part of this case study: how did the civilian academic sector and the military cooperate to recover from the hepatitis outbreak while also controlling the operational narrative?

As it turned out, the second task provided the solution to the first. To conduct enough research to discover a therapy for the hepatitis outbreak afflicting the military, particularly in Europe and Africa, the biomedical elite needed human subjects. They soon discovered that, by suppressing information about studies that used human subjects with questionable capacity to consent, they could gain more latitude by "advancing accounts that portrayed research subjects as freely choosing to make vital contributions to the war effort."[6] Valorizing these human subjects inoculated the War Department against further public-relations embarrassment and appealed to the spirit of altruism endemic to the American zeitgeist during the exigencies of global war.

Neither Soldiers on U.S. soil nor the general civilian population made a suitable research population because, in Bayne-Jones's words, "the possibility of the spread of the disease in a community, the attendant publicity, and the possible bad effect of the experiment upon public relations of the War Department."[7] Conscientious objectors, however, provided a target-rich population from which researchers could solicit volunteers for controlled-infection studies. They existed in relatively large numbers, and media portrayals of their volunteerism would go a long way toward soothing their individual consciences while also winning public favor for hepatitis infection experiments.

Upon receiving a draft summons, conscientious objectors had alternatives to jail time: they could either accept noncombatant roles in the military or request admission to Civilian Public Service (CPS) camps. These camps often occupied converted New Deal Civilian Conservation Corps sites. There, objectors had opportunities to perform labor of national importance under civilian direction without the strictures of close confinement in a prison. Although some research subjects were prisoners, mental patients, and hospital patients, the number of conscientious-objector research subjects grew to more than one thousand over the course of the war. Civilian Public Service camps represented a novel innovation that several Christian denominations secured through President Roosevelt's reluctant executive order in 1941. "Roosevelt reportedly felt the proposal was too easy on men who sought to evade military service, but the plan's architects pointed out that, during World War I, conscientious objectors had caused problems for the military disproportionate to their numbers; it was better to keep them busy in out-of-the-way locations."[8]

These denominations, known as Peace Churches, included the Mennonites, Brethren, and Quakers. In order to financially substantiate their lobbying, the peace church groups financed the CPS camps, totaling more than seven million dollars. In 2026, that amount equates to approximately one hundred and fifty-five million dollars. This is a necessary nuance when considering the ethics of using conscientious objectors in these experiments. The peace churches lobbied for, funded, and volunteered for these experiments. Indeed, as Halpern notes, "The church community itself initiated use of conscientious objectors as subjects in wartime medical research."[9] It is worth studying the cultural and religious factors that animated such volunteerism from these denominations.

These religious traditions placed a strong emphasis on demonstrating the value and coherence of Christian beliefs through work. This was particularly compelling for the young men in these denominations who desired to put their faith—and their bodies—to patriotic use without going to war. Hence the quote from Timothy Haworth that this essay opened with, "I feel I owe my first allegiance to God and to the moral standard in which I believe and that to kill and to wage war would be a denial of the way which I have chosen. I am willing to die in serving my Country—I am not willing to kill for it."[10] This sentiment nested squarely with the religio-military zeitgeist of the era captured by General MacArthur:

> The military code that has come down to us from even before the age of knighthood and chivalry," he said, had found its highest expression in the soldier, who, "above all men, is required to perform the highest act of religious teaching—sacrifice. In battle and in the face of danger and death he discloses those divine attributes which his Maker gave when He created man in His own image. However horrible the incidents of war may be, the soldier who is called upon to offer and to give his life for his country, is the noblest development of man-kind.[11]

To capitalize on this religious enthusiasm, the government and its civilian partners needed a strategy that made participation appear less formidable to conscientious objectors.

Two-Pronged Approach

That effort unfolded in two ways: the government used civilian media to portray participation as honorable, and it downplayed the long-term risks of the experiments to make volunteering seem more acceptable.

Media Portrayal

The first prong of this approach involved the U.S. government partnering with civilian print media companies to portray these volunteers as heroes. Comic books from the 1920s to the 1940s gained cultural footing as a powerful method of "visual rhetoric." Comic books often depicted medical and military heroes in valorous action, and many Americans learned about and aspired to the contributions of these historical figures, including Walter Reed and Louis Pasteur.

Historians Dick Lupoff and Don Thompson say,

> For at least a quarter century, the comic book was the dominant element in the culture of American children — they read them, re-read them, collected them, traded them. During the

> same period, especially during World War II, when servicemen with limited off -duty time hungered for cheap and quickly readable material, it achieved great (though less publicized) popularity as reading matter for adults.[12]

As Hansen opined, around the time the Third Reich subsumed the Weimar Republic in 1933, comic books were becoming a national passion in America. These visual depictions valorized both the research physicians who conducted the experiments and the research subjects who selflessly volunteered their lives for the greater good. This media helped swell an optimism that seized the American imagination, with an inexorable sense of heroic progress against both disease and America's military enemies, even—and especially—at great cost. Hansen exemplified this spirit with the following comic strip: "The optimistic march of progress that pervades these stories stepped unhesitatingly over the dead patients, the sacrificed animals, and even the men who died from experimentally induced yellow fever, with a frank acceptance of risk and death that was permissible . . . in wartime."[13]

FIG. 81. "The morgue!" two panels of "The Conquest of Diphtheria," *Real Life Comics* 11 (May 1943), 31. © 1943 Nedor Publishing Company. All rights reserved. Author's collection.

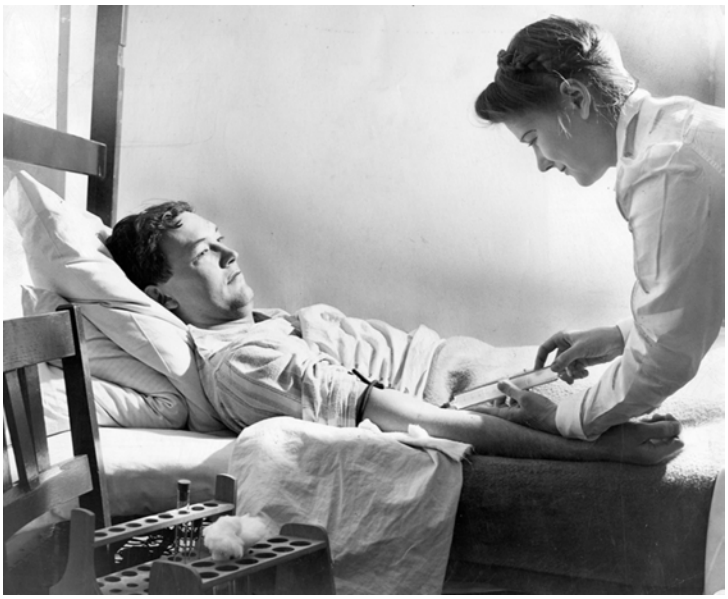
The characters most often depicted were doctors and research scientists. The subjects of the experiments—that is, those who assumed the risk in an act of selfless vulnerability—needed a public relations portrayal that dovetailed their service with that of the researchers conducting the experiments. In all of these depictions, the point of view was biographically derived. Put differently, visual artists—not the research subjects—told these participants' stories, and those artists had incentives to minimize the risks of the experiments and maximize the potential benefits of the study's results.

Halpern describes how this was a deliberate strategy of the civil-military partnership:

> In the winter of 1944–45, Bayne-Jones changed his approach to media coverage and implemented a strategy for shaping accounts published in newspapers and magazines. It helped that scientific papers from the hepatitis program had begun to appear. Bayne-Jones now issued press releases about the experiments and also allowed researchers to disclose information so long as reporters and their editors agreed to submit articles to his Public Relations Bureau for approval before publication. He then sought to mold the content and tone of submitted pieces. He detested the term guinea pig. He wanted reporters to use dignified language and emphasize the scientific contributions achieved by the research. On a number of occasions, he wrote the science editors of major newspapers correcting inaccurate statements about the experiments. His letters often generated deferential responses. The mainstream press was willing to frame the experiments as efforts to advance national defense. With media cooperation, Bayne-Jones implemented narrative logistics aimed at affecting social perceptions and public sentiments about disease-inducing experiments.[14]

For example, "in February 1945, the Philadelphia Evening Bulletin ran an article approved by Bayne-Jones titled "Fighting the War on Disease"; the sub-headline added, "50 Conscientious Objectors Voluntarily Submit to Jaundice in Army Experiments Here to Combat Widespread Malady.""[15]

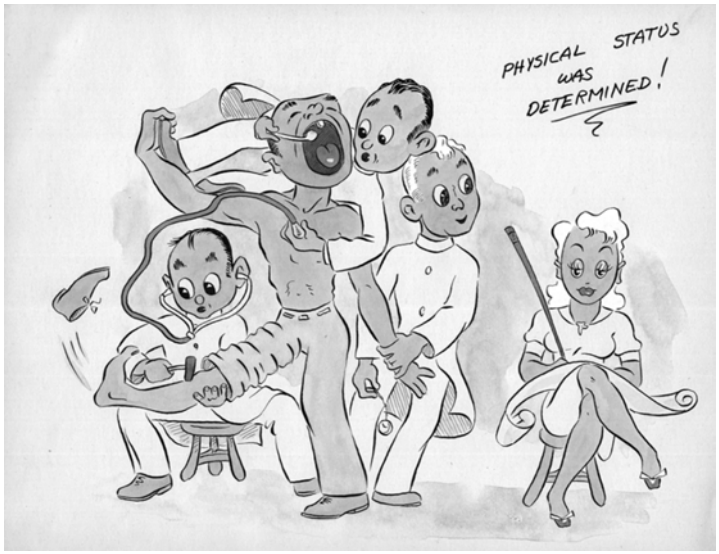
Another example is this photo, "appearing with the Philadelphia newspaper article about Stokes's hepatitis experiments, this photo shows a bedridden CPS man who, the story suggests, sacrificed his health for the good of others."[16]



Yet the government's public portrayal of these volunteers was not the only account of their experience. Sydney Halpern recently uncovered the autobiographical cartoons of conscientious objector David Miller, who underwent the hepatitis studies. Miller's account complicates the heroic public narrative by showing how he coped with this novel experience through gallows humor. His cartoons bring the reader one step closer to the lived reality of these conscientious objectors' involvement in controlled human infection trials.

Upon arriving from the CPS camps at the experiment sites, usually at Ivy League institutions, the subjects

underwent a battery of tests. Afterward, all participants, including Miller, gathered on the eve of the experiments for a social event jovially called the "Pre-Inoculation Dance." Another participant, Timothy Haworth, described the setting, including Miller's artwork: "The large room was cleverly decorated by our two artists . . . with a series of gaudy cartoon murals on the general subject of pigs, test-tubes, Dracula-like Doctors sucking blood from squirming patients, inoculations with pneumatic drills, while absolutely the most luscious blood hussy dressed in a nurse's uniform [also an artist's depiction] was coyly looking on."[17]



As Halpern notes,

> The Gazette reproduced imagery created by the unit's cartoonists that had appeared earlier on the walls of the fraternity house's great room: a squirming patient chased by a humongous needle, a desolate-looking man enclosed in a giant test tube. The grimness of the imagery was in sharp contrast to the men's good-natured bantering. A cartoon on the Gazette's cover pointed to the disquiet just beneath the surface of the camp members' affability. The drawing showed a young man fleeing from an amorphous ghost that clutched at his coattails; the specter's name was Jaundice.[18]

That these research subjects indulged in slightly macabre humor suggests an attempt to cope. By making light of an otherwise serious and consequential experience, they practiced the kind of gallows humor that Freud describes

in his essay "Humour." Using the example of a death-row inmate about to receive his sentence, Freud writes,

> There is no doubt that the essence of humour is that one spares oneself the affects to which the situation would naturally give rise and dismisses the possibility of such expressions of emotion with a jest. . . Like jokes and the comic, humour has something liberating about it; but it also has something of grandeur and elevation. . . . The ego refuses to be distressed by the provocations of reality, to let itself be compelled to suffer. It insists that it cannot be affected by the traumas of the external world; it shows, in fact, that such traumas are no more than occasions for it to gain pleasure. Humour . . . is rebellious.[19]

This accords with social scientist Renée Fox's observation about the grim humor she witnessed among both research physicians and their subjects in human experimentation in her seminal work *Experiment Perilous*. She describes how "tragi-comedy" helped her cope with the "anguished emotions" and "ethical dilemmas" she observed during these experiments.[20] Taken together, the gallows humor of the conscientious objectors and Fox's observations show that the civil-military partnership did more than simply conduct research for the sake of the fighting force, they shaped the public perception in ways that obscured the moral reality of the experiments.

Excluding Disability Disclaimers and Support

The second prong of the effort to secure more Peace Church volunteers was to downplay the risks of live hepatitis infection experiments, including long-term disability. Public support alone was not sufficient. The same strategy that elevated conscientious objectors as patriotic volunteers also depended on minimizing the risks of the experiments. Flyers advertising the hepatitis studies, for example, portrayed hepatitis as seldom fatal, with a mortality rate of around one in a thousand. Yet the flyers did not mention the possibility of long-term disability.[21]

The lack of mention of disability risks was no mere oversight; it was a deliberate omission rooted in parsimony. Bayne-Jones himself said as much, noting that it was out of the question to remediate injured research subjects, including through life and disability insurance: "I have been informed that the Government does not provide compensation for religious objectors who may be disabled in the course of work on projects or in service of the type contemplated in these experiments on jaundice."[22]

As it turned out, the conscientious objectors' health outcomes did not prove as poor as those of subjects

in parallel experiments.[23] Researchers also enrolled prisoners and mental patients; these populations experienced severe illness, disability, and even death, and the government provided no compensation to surviving family members. When World War II drew to a close, the men who survived the experiments showed mixed outcomes. Some seemed to recover fully, whereas others continued to experience long-lasting liver injuries.

The writing was on the wall as the CPS experiments drew to a close. Two conscientious objectors still experienced residual sickness from their exposure to live hepatitis. Joseph Stokes Jr., chair of pediatrics at the University of Pennsylvania and a key infectious-disease researcher in the CPS experiments, anticipated that the research subjects needed longitudinal medical care. He requested medical discharges for the two men still recovering at the end of the experiment, along with the attendant medical care for the injuries they sustained during the study. He felt "the need for consideration of any man who may suffer sequelae of hepatitis. Despite the signing of waivers, there would appear to be some obligation in connection with these individuals."[24] Bayne-Jones declined his request, saying, "I will call your attention to the waivers signed by these men. It seems to me that the second paragraph would provide for your taking care of them under the medical research contract for your Commission until you feel that they are well enough to be removed from your medical care."[25] These wartime infection studies operated before the late-1970s emergence of formal federal research protections, and they remained narrowly fixed on short-term military necessity rather than the long-term consequences borne by the subjects themselves.

This situation put peace church leaders in a difficult position. They had lobbied for the Civilian Public Service camps, funded the camps, and offered religious encouragement to their constituents to volunteer for the hepatitis experiments. Now, however, some of these men suffered and did not receive continued medical support for the disabilities they incurred during their patriotic service. These leaders deeply regretted their inability to obtain medical discharges for the volunteers. As Halpern records:

> One Quaker leader noted, "Directors of camps reported great trouble in securing medical discharges for men who were mentally or physically unfit for participation in camp life, and the camps did not have facilities or flexibility for taking care of such men." The source of this discontent was even broader: Selective Service exerted greater control over CPS than the church organizations ever envisioned when they embarked on their partnership with the agency. As a result, church leaders lacked leverage to successfully advocate for CPS assignees, and were often put in the position of being—as the Quaker elder put it—"instruments for carrying out Selective Service policies."

The bioethics headlines did not stop with the conclusion of World War II. The Nuremberg proceedings revealed a well-organized program of medical experimentation on concentration camp inmates:

> with the support of the Third Reich, trial defendants had implemented a well-organized program of medical experiments with concentration camp inmates. Nazi scientists had exposed prisoners to freezing temperatures, conditions of extreme altitude, seawater ingestion, poisons, mustard gas, and phosphorous burns. They had created infected wounds and performed experimental surgeries involving sterilization, muscle and nerve grafts, and bone transplantation. They had conducted human infection experiments with unmodified pathogens including typhus, malaria, and hepatitis. The subjects were nonconsenting victims and, in many instances, researchers proceeded with the expectation that the prisoners would die.[26]

During an overlapping time period with the Nuremberg Trials, the American biomedical elite expanded its medical experiments. Between 1946 and 1954, the research population size for hepatitis infection studies tripled in number. These research subjects exclusively resided in closed institutions, including prisoners, mental patients, and developmentally disabled children.

To conclude the first movement of examining the historical facts of this case study, Halpern summarizes:

> For a quarter century, America's biomedical elite had sustained a narrative that legitimized even highly injurious human experiments. Its members crafted accounts that resonated with wartime and Cold War ideologies and with the viewpoints of leaders of the multiple institutions that opened their doors to medical researchers. In these portrayals, risk-laden studies were crucial for advancing disease eradication and bolstering national defense; conscientious objectors and prisoners who participated in these studies were willing volunteers making heroic sacrifices for the common good. Mainstream newspapers and magazines disseminated stories about the altruism and patriotism of these subjects, while scientists kept disease-inducing interventions with impaired persons largely out of sight. With help from a deferential press, the biomedical elite controlled the public conversation about human experimentation and sustained widespread support for the research.[27]

Ethical Analysis

This paper turns to the ethical stakes of a civil-military collaboration that helped shape the American will to fight while neglecting the long-term duty of care owed to research subjects. It argues that research defended as military necessity at times violated human dignity. As bioethicist C. Ben Mitchell avers, "The dignity of individual human lives both prescribes and proscribes how humans are to be treated. Human beings may not be used as means to our own ends."[28] From this case emerge three ethical lessons: how to conduct research ethically with a captive population, what duties of care researchers owe for long-term harms, and how religious denominations should judge their own complicity when they encourage participation in the war effort.

Captive Research Population

Conscientious objectors in the CPS camps already had limited autonomy, but this did not void their right to "respect for persons," as the Belmont Report later codified.

> The involvement of prisoners as subjects of research provides an instructive example. On the one hand, it would seem that the principle of respect for persons requires that prisoners not be deprived of the opportunity to volunteer for research. On the other hand, under prison conditions they may be subtly coerced or unduly influenced to engage in research activities for which they would not otherwise volunteer. Respect for persons would then dictate that prisoners be protected. Whether to allow prisoners to "volunteer" or to "protect" them presents a dilemma. Respecting persons, in most hard cases, is often a matter of balancing competing claims urged by the principle of respect itself.[29]

This writer believes that the controlled infection experiments on conscientious objectors were ethically permissible, but the protocols were not sufficiently thorough and unduly influenced the research subjects. By withholding information necessary for truly *informed* consent, researchers violated the subjects' human dignity.[30]

Duty to Care

Researchers have an obligation to provide ongoing care for adverse medical conditions that research subjects incur from an experiment.[31] As the Belmont Report would later codify, "beneficence" is a critical component of human research ethics.[32] "The United States provides no readily available compensation for injuries sustained in government-sponsored medical research. Short of initiating a legal suit, injured subjects have no means for obtaining recompense."[33] This writer believes that the civil-military cooperation that produced the hepatitis studies failed to provide ethically obligatory long-term medical care for participants who suffered in the decades following the trials' conclusion.

Denominational Support

Denominations ought to consider the long-term consequences of participating in civil-military cooperation during large-scale combat operations. Such cooperation may begin under the banner of patriotic service, yet its moral

trajectory can extend far beyond its initial justification. Here the Belmont Report's principle of justice remains instructive: religious communities should weigh not only the social value of research, but also the distribution of its risks and burdens. Although the peace churches represent a minority tradition within American Christianity, their engagement with wartime service still intersects with the broader Christian inheritance of just war theory. For that reason, this writer believes that churches should be especially clear-eyed in judging licit participation and in discerning how far their ecclesial influence ought to direct their members toward hazardous forms of national service.[34]

Conclusion

Harnessing and catalyzing the American will to fight can be a prudent end in large-scale combat operations. But prudence does not provide proleptic moral clairvoyance. No civil-military partnership can predict every downstream consequence of wartime decisions, especially when leaders act under uncertainty and incomplete medical knowledge, as they did with hepatitis in the first half of the twentieth century. Still, uncertainty does not suspend obligation. War creates incentives to cut ethical corners, and military leaders should anticipate those pressures and build guardrails against them. Respect for human dignity should restrain wartime research in ways that require meaningful informed consent and responsibility for long-term harms, including disability care.[35] Favorable research outcomes do not justify canalizing religious conscience or treating preventable suffering as an acceptable cost. That is the cautionary lesson this case study offers today's military leaders.

Endnotes

1 Special Form for Conscientious Objection (Form 47, circa 1942), SCPC CPS, Part 2, Box 75, Folder: Haworth, Timothy.

2 In fact, this author wrote this paper almost exclusively using her incredible research. Indeed, this project would not be possible without *Dangerous Medicine*. Proper attribution is therefore in order: unless otherwise noted, the reader should assume that the following case study is a compilation and rearrangement of Halpern's work either in paraphrase or direct quotation. This author will continue to use footnotes for the most explicit references.

3 Sydney A. Halpern, *Dangerous Medicine: The Story Behind Human Experiments with Hepatitis* (New Haven, CT: Yale University Press, 2021), 1.

4 Halpern, *Dangerous Medicine*, 18.

5 Halpern, *Dangerous Medicine*, 19.

6 Halpern, *Dangerous Medicine*, 41.

7 Halpern, *Dangerous Medicine*, 42.

8 Halpern, *Dangerous Medicine*, 43.

9 Halpern, *Dangerous Medicine*, 44.

10 Special Form for Conscientious Objection (Form 47, circa 1942), SCPC CPS, Part 2, Box 75, Folder: Haworth, Timothy.

11 William Manchester, *American Caesar: Douglas MacArthur, 1880–1964*, 1st ed. (Boston, MA: Little, Brown and Company, 1978), 172.

12 Dick Lupoff and Don Thompson, eds., *All in Color for a Dime*, 1st Krause Publications ed. (Iola, WI: Krause Publications, 1997), 11.

13 Bert Hansen, *Picturing Medical Progress from Pasteur to Polio: A History of Mass Media Images and Popular Attitudes in America* (New Brunswick, NJ: Rutgers University Press, 2009), 199-200.

14 Halpern, *Dangerous Medicine*, 56.

15 Halpern, *Dangerous Medicine*, 56.

16 Halpern, *Dangerous Medicine*, 58.

17 Halpern, *Dangerous Medicine*, 65.

18 Halpern, *Dangerous Medicine*, 68.

19 Sigmund Freud, "Humour," trans. Joan Riviere, *International Journal of Psycho-Analysis* 9, no. 1 (January 1928): 2–3.

20 Renée C. Fox, *Experiment Perilous: Physicians and Patients Facing the Unknown* (New York, NY: Routledge, 2019), 9.

21 Halpern, *Dangerous Medicine*, 47.

22 Halpern, *Dangerous Medicine*, 46.

23 The focus of these controlled infection experiments remained narrowly fixed on the wartime period, with little to no regard for long-term consequences. The President's Office of Scientific Research and Development directed funding toward vital research to ameliorate hepatitis, which thwarted warfighters in the European and Pacific theaters. Researchers did not receive formal guidelines safeguarding medical research subjects until the Belmont Report (1978). As such, these controlled infection trials proceeded under fewer risk-mitigating strictures than one would expect in the modern bioethics era.

24 Halpern, *Dangerous Medicine*, 77.

25 Halpern, *Dangerous Medicine*, 77.

26 Halpern, *Dangerous Medicine*, 84.

27 Halpern, *Dangerous Medicine*, 161.

28 C. Ben Mitchell, "Prepared Statement of C. Ben Mitchell, Ph.D.," in *Issues Raised by Human Cloning Research: Hearing before the Subcommittee on Oversight and Investigations of the Committee on Energy and Commerce, House of Representatives, One Hundred Seventh Congress, First Session, March 28, 2001*, ed. U.S. Congress et al. (Washington, DC: U.S. Government Printing Office, 2001), https://www.govinfo.gov/content/pkg/CHRG-107hhrg71495/html/CHRG-107hhrg71495.htm.

29 National Commission for the Protection of Human Subjects of Biomedical and Behavioral Research, *The Belmont Report: Ethical Principles and Guidelines for the Protection of Human Subjects of Research* (Washington, DC: U.S. Department of Health, Education, and Welfare, Office of the Secretary, 1979), 4, https://www.hhs.gov/ohrp/sites/default/files/the-belmont-report-508c_FINAL.pdf.

30 Dennis L. Spence, "Ensuring Respect for Persons When Recruiting Junior Enlisted Personnel for Research," *Military Medicine* 172, no. 3 (March 2007): 251.

31 Ignacio Mastroleo, "Post-Trial Obligations in the Declaration of Helsinki 2013: Classification, Reconstruction and Interpretation," *Developing World Bioethics* 16, no. 2 (2016): 80, https://doi.org/10.1111/dewb.12099.

32 " The principle of beneficence often occupies a well-defined justifying role in many areas of research involving human subjects." *The Belmont Report,* 5.

33 Halpern, *Dangerous Medicine*, 185.

34 "There are several widely accepted formulations of just ways to distribute burdens and benefits. 1) to each person an equal share, (2) to each person according to individual need, (3) to each person according to individual effort, (4) to each person according to societal contribution, and (5) to each person according to merit." *The Belmont Report*, 5.

35 Tom L. Beauchamp and James F. Childress, *Principles of Biomedical Ethics*, 7th ed. (New York, NY: Oxford University Press, 2012), 118.