When Intelligence Met Intelligence: Psychological Testing and National Security During the Early Twentieth Century

by

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**introduction**

Intelligence is a gift.
Intelligence is a skill.
Intelligence is measurable.
Intelligence is tested.
Intelligence is psychological.
Intelligence is an activity.
Intelligence is controlled.
Intelligence is organized.
Intelligence is spying.
Intelligence is information.
Intelligence is secret.
Intelligence is artificial.
Intelligence is stolen.
Intelligence is leaked.
Intelligence is war.
Intelligence is superiority.

The concept of *intelligence* transcends the boundaries of disciplines, often in baffling ways. Intelligence is both human and artificial; it is both an activity and a human faculty; it is both disseminated and classified; it has both social capital and disadvantage; it is both measured and immeasurable.
Most often, however, intelligence has two main connotations: intelligence as a human characteristic to be harnessed or measured, and intelligence as denoting a certain set of national security activities, mostly associated with a gathering of information. Through time, the word “intelligence” developed a range of meanings. According to the *Oxford English Dictionary*, English uses of the word originated from French (*intelligence*) and Latin (*intellegentia*), which both denoted comprehension, understanding, intellect, and even an element of spirituality. In sixteenth-century French, however, *intelligence* was also used to signal the “communication of information, especially of confidential information.” The word was first used in the English language around the thirteenth century to describe a spiritual being, and its use as “a faculty of understanding” or “intellect” appeared in the fourteenth century. Intelligence as an activity, that is “the obtaining of information, [especially] of military or political value” or “espionage,” most likely emerged in sixteenth- or seventeenth-century English.  

Despite their shared etymology (a linguistic link), there was no *historical* link between these two separate conceptions of intelligence prior to the Second World War. This project explores their historical encounter.

Intelligence as an *activity* represents the endeavor to collect and analyze information to support the decisions of military commanders. In recent years, the concept of military intelligence has piqued the interests of mathematicians, biographers, engineers, and historians, as well as drama fanatics, curious intellectuals,

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and puzzle enthusiasts. The American public is fascinated by stories of intelligence for national security purposes. Books recounting the stories of spies and saboteurs line library shelves dedicated to wartime espionage; biographers drool over the adventures of Alan Turing, the German Enigma machine, and Turing’s renowned accomplishments at Bletchley Park; wartime historians continue to offer examinations of pre-1936 intelligence records in an attempt to determine whether the attack on Pearl Harbor could have been prevented; and we voraciously read memoirs of former CIA agents that recount adrenaline rushes and close calls. Spying and cryptography, shadowy and thus captivating fields of study within the realm of intelligence, are suitable for discussion “over cocktails at the Carlyle Hotel in New York City, a fine place for ideas.”2 Successful intelligence missions—particularly those that are classified—signify American victories, offering the satisfaction of a solved puzzle, crime, or message, and stories of “clever people finding ingenious ways to communicate.”3 Modern notions of military intelligence also fuel thoughts of scandal, manipulation, and transparency when we consider the stories of individuals like Edward Snowden, the rise of WikiLeaks, and the meddling of foreign countries in national campaigns. Nonetheless, today we applaud military intelligence activity for its institutionalization, strict organization, and elements of risk.

Notions of intelligence as a psychological construct have always fostered intense debate among philosophers, psychologists, sociologists, and other scientists.

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3 Ibid., 11.
In his article “The Concept of Intelligence in Psychology and Philosophy,” Peter Lanz reminds us of the long list of questions that remain unanswered regarding the nature of psychological intelligence. Lanz cites a 1921 symposium at which fourteen psychology “experts” of the era were each asked to offer their definition of intelligence. The diversity of the responses from the psychologists in attendance, later published in the Journal of Educational Psychology, is telling. Is intelligence “the power of good responses from the point of view of truth or facts,” as Edward Thorndike put it? Or is it “the ability to carry on abstract thinking,” per Lewis Terman? Or is intelligence “having learned or the ability to learn to adjust oneself to the environment” (S.S. Colvin), “the capacity for knowledge” (V.A.C. Henmon), or more simply, “the capacity to acquire capacity” (H. Woodrow)?

Psychologists and theorists have proposed endless definitions for human intelligence, as well as theories regarding its heritability, its ability to be taught, and so on. Yet Lanz writes, psychologists could administer thousands of IQ-tests and yet still never truly understand the human mind. The definition of intelligence is fluid; as a concept, it is hard to pin down. The search for a viable and inclusive definition for human intelligence continues. The strong interest in defining a single meaning of intelligence, however, characterizes a unique moment at the start of the twentieth century.

Within the disciplines of both psychology and military information-gathering, the twentieth century was an era of progress. Consequently, it brought challenges to

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5 Ibid.
overcome and goals to achieve. More specifically, two twentieth-century phenomena transformed these fields: war on an unparalleled scale necessitated the consolidation of intelligence activity, and the eugenics movement encouraged the quest for a single metric of human potential.

Chapter One of my project explores the first of these phenomena by offering a history of intelligence as an activity—the origins of organized military intelligence in the United States from the Revolutionary War to the interwar period. World War I and World War II transformed American warfare as we knew it. Both wars required technological developments, coordination among agencies that were previously unassociated, planning and coordination of domestic and foreign operations, and the mass mobilization of millions of people at unprecedented speeds. Military officials were forced to adapt to a fast-paced, global conflict that necessitated the efficient yet effective training of Americans serving the nation both on the battlefield and behind the scenes. Historically, US intelligence efforts were disjointed and unorganized, as a variety of agencies conducted the activities that we now consider essential to the intelligence arena. This chapter begins with a look at rudimentary information-gathering efforts during the eighteenth and nineteenth centuries. It discusses later efforts conducted by agencies such as the Military Information Division (MID) and the Signal Corps and the escalation and de-escalation of their activities. I also introduce some of the most prominent (and controversial) figures in cryptanalysis, including William F. Friedman and Herbert O. Yardley. Chapter One concludes with the United States’ entrance into World War II.
Chapter Two explores the second phenomena in question by providing the history of intelligence as a psychological concept in the early twentieth century. The goals of this chapter are twofold. First, it provides an overview of important developments in the field of psychological intelligence. To do so, I discuss the accomplishments of French psychologist Alfred Binet, American psychologist Lewis Terman, and others, as well as the introduction of mental testing in the United States. I also highlight the eugenic forces that encouraged the perception of intelligence as general fitness and the development of measurement tools. The eugenics movement—which advocated for societal improvement by encouraging the breeding of “desirable” traits—pushed psychologists to find a single metric that would easily and holistically determine human value. Second, this chapter examines an early encounter between psychological intelligence and the military. During World War I, psychologists were employed to help with military personnel selection. The military’s embrace of the narrow intelligence metric proposed by psychologists made a great deal of sense given the military’s hierarchical culture of generalists. The goal was to develop officers with basic skills to operate within an inflexible chain of command; specialists were mostly unwanted. A single-factor scale of intelligence, it seemed, provided the perfect method for categorizing humans for the early twentieth-century military. The use of intelligence testing during World War I represented one early

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6 An emphasis on “general skills” appears to be less common today. A liberal arts education, however, may be one good analogy for the military culture of the early nineteenth-century. This type of education prioritizes the development of broad skills for critical and creative analysis that may prepare a student for a variety of professions. On the contrary, other education models prioritize the teaching of technical skills for a specific occupation.
interaction between psychological intelligence and the national security apparatus, which served as a foundation for its use during World War II.

Chapter Three presents World War II as an important climax: it represented both the consolidation of previously disjointed intelligence work, as well as the reconceptualization of intelligence as a metric for human potential. These developments collided due to the rapid establishment of the Office of Strategic Services (OSS) at the start of the war—intelligence met intelligence. The creation and establishment of the OSS in 1942, the predecessor of today’s Central Intelligence Agency (CIA), demonstrated an impressive unification of intelligence efforts. The agency conducted a wide variety of foreign intelligence activities including spying, sabotage, cryptography, subversion, and guerilla warfare. To accomplish this consolidation and survive a fast-paced war, the OSS developed its own assessment program for evaluating agents. Unlike the intelligence scale utilized during World War I that strictly ranked personnel within a highly-vertical system, I argue that the informal and horizontal nature of the OSS, as well as the diversity of its activity, necessitated a broadening of the scale. While intelligence testing during both wars instituted psychological testing for national security purposes, OSS efforts stretched our understanding of both military and human intelligence by consolidating activities and uniquely assessing intelligence agents, respectively. In analyzing the OSS, we see the application of a much wider conception of intelligence for assessing the abilities of potential spies.
chapter one
disjointed: the history of intelligence as an activity

This story begins at the end. Today, military intelligence refers to the general acquisition of information used to guide military decisions, as well as the gathered material itself. American intelligence activity is currently conducted by seventeen unified departments, collectively called the “Intelligence Community,” or the IC. Each department reports to the President and the National Security Council, and operates generally under the general supervision of the Director of the National Intelligence. The IC includes small intelligence sectors of the Army, Navy, Marine Corps, Air Force, and Coast Guard; the CIA, the National Security Agency (NSA), and the Federal Bureau of Investigation (FBI); groups under the State, Homeland Security, Energy, and Treasury Departments; and the Drug Enforcement Administration and National Reconnaissance Office.¹ On December 4, 1981, President Ronald Reagan issued Executive Order 12333, titled “United States Intelligence Activities,” which outlined the goals, responsibilities, and powers of government intelligence departments. It delineated the responsibilities of each member of the IC, provided information about intelligence collection and Congressional oversight, and offered descriptions of a variety of other protocols and procedures. The Order clearly prioritized collaboration between separate agencies: “All departments and agencies have a responsibility to prepare and to provide intelligence in a manner that allows the full and free exchange of information,

consistent with applicable law and presidential guidance.\textsuperscript{2} President Reagan’s Order requested the reinstatement of strict intelligence organization. His Order was reminiscent of a similar request following World War II. The National Security Act of 1947, which established the CIA, called for the careful and deliberate organization of collaborative intelligence activities. This level of organization represented a departure from how the United States had historically conceived of military intelligence prior to the Second World War; it established “the modern intelligence cycle,” or the repeating pattern of determining needs, collecting relevant information, and then appropriately publishing the results, both during times of war and peace.\textsuperscript{3}

The Central Intelligence Agency, better known as the CIA, emerged in 1947 after the dissolution of its predecessor, the Office of Strategic Services (OSS), in 1945. The OSS, a highly-structured civilian foreign intelligence agency, independent of the armed forces, originated from a set of historically-disjointed military agencies and departments conducting separate information-gathering and analysis operations, now categorized broadly as “military intelligence.” The CIA further consolidated intelligence activity into a permanent, bureaucratic agency. Understanding the dramatic escalation and consolidation of American intelligence activity in the military during World War II requires an examination of its unstructured past.

John Patrick Finnegan, author of the United States Army’s official military intelligence history defines military intelligence activity as “the collection of information by commanders on the enemy and the battlefield environment they must

\textsuperscript{3} John Patrick Finnegan and Romana Danysh, \textit{Military Intelligence} (1998), 4-5.
confront.”\textsuperscript{4} Finnegan, however, retrospectively argues that military intelligence was, and has always been, distinct from other war departments and activities, warranting its own identity and institutional structure. As a result, Finnegan defines historical intelligence through a modern lens that overlooks the dispersion of information-gathering activities across several departments. (As it is used in the definition of “the modern intelligence cycle,” I use the word “modern” to describe agencies and activities following World War II and the establishment of the OSS). Historically, the quest to define a set of activities as “military intelligence” was overlooked. I argue that modern military intelligence can be distinguished from previous models due to two unique factors: today’s intelligence community is permanent, and it unifies a set of once-distinct information-gathering and analysis activities to maintain national security.

Prior to the Second World War, there was no single organization, inside or outside the military, that held a monopoly on all of the activities that we now consider to be “intelligence.”\textsuperscript{5} This chapter explores the history of fragmented intelligence gathering in United States military departments and technical branches from the Revolutionary War until the interwar period. Its uneven trajectory is marked by devastating periods of instability due to budget cuts and demobilization, as well as the rise and fall of a variety of military departments that shared intelligence responsibilities.

\textsuperscript{4} Ibid., 3.

\textsuperscript{5} The word “intelligence” may not have been consistently used to describe historical information collection and its associated activities. In fact, I have argued that even the use of the term “intelligence” refers to our conceptions of intel activities within “the modern intelligence cycle.” Moreover, the word “intelligence” is not used in the title of an information-gathering organization until 1920. Nevertheless, I use the terms “information-gathering” and “intelligence” interchangeably to discuss the history of information collection in the military.
Spying During the Revolutionary War

Unlike Europe’s largest powers, the United States was incredibly slow to adopt organized military intelligence activities as we know them today. Revolutionary War-era intelligence activities relied mostly on espionage for information collection. Espionage for the Continental Army was characterized by a loose network of agents who spied on British soldiers without formal training or organizational structures. Finnegan explains that during the eighteenth century, “the U.S. Army was small, it had no general staff, and there were no pressing military threats to drive intelligence collection.” Without a general staff, the military did not yet have a branch devoted to carrying out ancillary functions such as information gathering; rather, the organization of the Continental Army prior to and during the Revolutionary War focused primarily on the recruitment of troops and officers. Relying on British models, “the development of the logistical apparatus” (“logistical” referring here to any sort of intelligence collection) came only after the more crucial officer appointments and company organization. As “regiments were the property of their colonels,” administrative departments such as that of the Paymaster General (to control finances), Mustermaster General (to monitor enlisted men and their ranks), Commissary General of Stores and Provisions, Quartermaster General (to oversee the transportation of troops), and commander aides and secretaries were mostly left to the authority of local commanders.

Commander in Chief George Washington, who “had made great progress in

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6 Finnegan and Danysh, 3.
7 I explore the establishment of a general staff later in this chapter.
organizing, staffing, and disciplining his army” by October 1775, was not only charged with leading troops into battle. He also had a heavy hand in the structural maintenance of the Continental Army and its “functional” administrative branches by “reorganizing them into a genuinely Continental institution.”9 While Washington, most clearly a man of many hats, worked to restructure the growing American militia from a British template, he also deemed it necessary to engage in what would become some of America’s earliest information-gathering activities. Today, the CIA names Washington “America’s First Military Intelligence Director”; he employed Thomas Knowlton as commander of the first American “intelligence unit” and relied upon the “traditional intelligence sources available in the 18th century: scouts and spies.”10 “Knowlton’s Rangers”—20 officers and 130 soldiers—went on “secret missions too dangerous for regular troops,” the purpose of which are currently unspecified on the CIA’s official website. Washington’s information collection efforts during the war, while undefined and without direction from a formal department, relied mostly on espionage and deception:

He allowed fabricated documents to fall into the hands of enemy agents or be discussed in their presence; told couriers carrying bogus information to be captured by the British; and inserted forged documents in intercepted British pouches that were then sent on to their destinations. He had army procurement officers make false purchases of large quantities of supplies to convince the British that a sizeable Continental force was massing.11

Washington collected enemy information from “stay-behind agents” such as Hercules Mulligan, who spied on British soldiers that frequented his clothing shop, and

9 Ibid., 44.
established the Culper Spy Ring on Long Island, “one of the most effective American spy networks.” The Culper Spy Ring collected information on British occupiers in New York, even eventually utilizing secret ink and a simple cipher and codebook. Information from the Culper Spy Ring was largely “mundane,” yet provided Washington with sufficient information regarding British unit locations and morale. While perhaps rudimentary by today’s intelligence standards, Washington’s strong communication and leadership created conditions for success:

The network… was more than a collection of individuals, it was a system that came together through careful planning and direction. From the top, Washington was… issuing precise instructions and focusing the effort. At the bottom, each individual had specific assigned missions, and practiced solid tradecraft.\textsuperscript{12}

While Washington’s commitment to espionage led to some early successes, there was no institutional structure or cycle that sustained them beyond Washington’s time in command of the military. While espionage was important to Washington’s wartime agenda, his post-war successors did not follow suit: “the War Department’s central staff\textsuperscript{13} mainly concentrated on questions of administration and supply rather than operational planning” and “commanders served as their own intelligence officers, relying mostly on simple reconnaissance by scouts or cavalry.”\textsuperscript{14} Therefore, Washington’s title as “Intelligence Director” is largely ahistorical; it too quickly inserts our modern notions of centralized intelligence into a setting vastly different from today’s intelligence arena: Washington relied on individual ingenuity rather than

\textsuperscript{12} Bigelow, July - September, 2-3.
\textsuperscript{13} Bigelow’s use of “War Department,” now the United States Department of Defense, is slightly misleading, as the United States Department of War was not officially established until the ratification of the Constitution in 1789, which determined the structure of the federal government.
\textsuperscript{14} Bigelow, July - September, 4.
institutional support. After the war, demobilization caused the dissolution of Washington’s early spying system. This sequence of activity and demobilization would repeat many times in the future. Since intelligence activities were inextricably tied to military functions, peacetime demobilization (which happened after every major war) would always and naturally lead to the dismantling of intelligence operations.

The Civil War and Military Ciphers

Like during the Revolutionary War, information collection during the War of 1812 remained rudimentary and scattered. The military still relied predominantly on espionage, yet it also developed new methods for information collection—techniques of codebreaking. While the military made slight progress in organizing its information-gathering efforts, these successes were short-lived due to peacetime demobilization.

After the War of 1812, the US military, with “no direct, vertical, integrated chain of command,” made War Department cohesion virtually impossible. Secretary of War John C. Calhoun (1817-1825) ordered a reorganization of the War Department—which at the time had jurisdiction over the Army and Navy—after reflecting on the military’s wartime mistakes. Calhoun established a network of independent bureau chiefs, along with a commanding general in the field. In an

15 “Cohesion,” in this case, might be defined as the institution of “good discipline,” which “consists in the co-operation of the whole of a military force under the laws of subordination, and acting by the impulse of duty and command.” A Memoir, on the Principles and the Means of Organizing the General Staff of the United States Military Power [Microform], vol. 26064 (United States 1812), 21.
attempt to manage armed forces, naval operations, and other responsibilities, bureaus were assigned a particular area of focus.\textsuperscript{17} Bureau chiefs in Washington, who updated the Secretary of War on their individual matters, directed their own officers “at all levels of command.”\textsuperscript{18} This disjointed system, however, would not effectively mitigate conflict and miscommunications between the commanding general on the ground and bureau officials. This disorganized structure persisted into the 1840s. For example, General Winfield Scott, the longest-serving Commanding General of the United States and considered a hero of the Mexican-American War (1846-1848), later articulated his frustrations with the disorganized military system in a letter to the Secretary of War, William L. Marcy: “I do not desire to place myself in the most perilous of all positions—\textit{a fire upon my rear from Washington, and the fire, in front, from the Mexicans}.”\textsuperscript{19} According to Army Commanding General Terrence J. Gough, the lack of unity among the chiefs continued to inhibit coordination, and thus “the War Department suffered from overlapping and conflicting functions among the largely autonomous bureaus.”\textsuperscript{20} As tensions heightened between the Northern and Southern states and the country prepared for war, coordination did not improve. Information gathering, considered a natural military activity, would once again suffer.

The American Civil War necessitated the collection and analysis of information, while the conflict “broadened intelligence gathering beyond the long-
established methods of spies and scouting.” Still, intelligence activities remained unclassified in the military’s structure. The widespread use of the telegraph sparked the new adoption of wiretapping—the deliberate monitoring of conversation—for message interception, causing an increase in the creation and utilization of ciphers. A shared language, spoken by both the Union and the Confederacy, made tracking and analyzing enemy information from stolen documents, local newspapers, and war prisoner interrogations slightly easier. Nevertheless, armies on both sides relied most heavily on cavalry units “for immediate combat intelligence” and commanders continued to work locally by personally supervising or appointing their own staff members to oversee intelligence activities. Command Historian Michael E. Bigelow writes: “The result of this decentralized activity was a hodge-podge of uncoordinated intelligence structures that occasionally worked at cross purposes.”

In 1863, the United States established the Bureau of Military Information (BMI) at the behest of Army of the Potomac Commander Major Joseph Hooker and under the command of Colonel George H. Sharpe. The BMI, consisting of approximately eighty men, most of whom were scouts, traveled with Hooker and kept track of interrogations, map sketches, and corps charts. In gathering information from local newspapers, as well as intercepted messages and cavalry reconnaissance missions, Sharpe helped established the first “all-source collection effort” in American history, which proved critical to the Union Army’s success. Nonetheless, the scope of intelligence activity continued to be limited. The name of the Bureau, itself, demonstrates a lack of commitment to continued and centralized “intelligence”

21 Bigelow, July - September, 6-7.
as we know it today; the agency functioned only as an information-gathering arm of the army during wartime. Post-war demobilization once again dismantled these efforts. It was not until 1885, twenty years after the conclusion of the Civil War, that the small Division of Military Information was established through the Office of Adjutant General Richard C. Drum.22

The General Staff and Early Intelligence Consolidation

The twentieth century brought structural changes to the American military, particularly due to the establishment of the United States General Staff, a department tasked solely with carrying out administrative duties, in 1903. The General Staff would ultimately house military intelligence activities at the start of the twentieth century. In contrast with a special staff (tasked with conducting technical operations such as medical, police, and supply activities), a general staff more broadly described the officer groups that assisted commanders in creating and broadcasting their policies, and then supervised their execution.23

Prior to 1903, there had been a call for a clear hierarchical structure within the US military. An anonymous memoir published in 1812, titled On the principals and means of organizing the general staff of the United States military power, proposed a plan for a general staff that would “render the concerns of an army of twenty or fifty divisions, an operation as simple, and as easily accomplished, as the movement of a single company.” There existed, more specifically, a need for “aids to the commander in chief” who would be “selected for ability” and “competent to lead brigades and

22 Ibid., 7-8.
divisions.” The argument’s justification for this structure finds its roots in a strong push for a strict distribution of duties:

No single mind can be competent to conduct and see personally executed the various details of even a small army; and to discharge the scientific and meditative duties of the command also. As it is not possible for one man to execute all the various functions; to conserve and superintend its discipline, its health, order, and distribution; to render all that is required and necessary effective; the various functions are classed according to system among a duly qualified and adequate number of assistants…

George Washington’s Revolutionary War-era leadership model—as a “jack of all trades”—would not be sustainable as the US army expanded. Therefore, the establishment of an assisting staff, by eliminating “the pressure and perplexity of details,” would leave the General “secure in the intelligence by which he is surrounded” and “at leisure to devote his mind unembarrassed to the general operations of the campaign.” The Memoir outlined the two proposed major branches of a general staff: one devoted to the broad supervision of the executive’s “superior measures,” and the other devoted to the consistent recording of all military correspondence and information.

This early proposal for a general staff was not immediately implemented, but progress in military organization led to its adoption at the beginning of the twentieth century. Following Calhoun’s ineffective restructuring of the War Department into distinct bureaus, War Secretary Elihu Root (1899-1904) demanded a larger rearrangement of military agencies with strict executive control. Still officially under the command of the Secretary of War, the military was directed not only by the

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24 A Memoir, on the Principles and the Means of Organizing the General Staff of the United States Military Power [Microform], 26064.
25 Ibid., 24.
26 Gough.
Commanding General of the Army, but also continued to feel the strong influence of bureau chiefs and Congressmen. In order to combat these pressures, Root created the military’s first general staff, composed of forty-five members and directed by a chief who reported to the President via the Secretary of War.27 (The establishment of both the US General Staff in 1903 and its British equivalent in 1906 did not represent a new phenomenon; the first organized general staff was formed by the nineteenth-century Prussian military, and a similar structure was incorporated into other European militaries just after 1870.28) Bureau chiefs feared that a powerful General Staff would “clamp militarism upon the national”; thus, upon its formation, the Staff was granted limited authority as an advisory service, rather than an operative one.

The General Staff was divided initially into three sections, and then restructured by 1921 to include five sections: Personnel and Administration (G-1), Intelligence (G-2), Operations (G-3), Supplies (G-4), and Training (G-5).29 The Military Information Division (MID) was eventually incorporated into the Staff’s G-2 section in 1903.30 Each section was to be guided by a colonel except G-2, the Intelligence division, “whose chief was thus inferior in rank to the other four Assistant Chiefs of Staff, to his opposite in the Navy, and to a number of foreign military attaches with whom he had frequent dealings...”31 Under Drum, the military chief administrative officer, the MID gathered general information on foreign militaries, and eventually controlled the military’s attaché system—“the back-bone of

28 “General Staff.”
29 Watson, 57.
30 Finnegan and Danysh, 3.
31 Watson, 70.
national peacetime foreign intelligence until the 1940s—and its sixteen posts across the globe by 1898.\textsuperscript{32} Foreign intelligence activities eventually conducted during World War II, as discussed in Chapter Three, would echo the activities of the emerging military attaché structure. High-ranking officials stationed at foreign posts provided “intimate knowledge” of the country in which they operated. They advised the US ambassador as well as other military officials on intelligence matters, and as a result came to represent a diplomatic method of information manipulation.\textsuperscript{33}

The 1903 General Staff represented the beginnings of a strict, hierarchical military structure, which included both officers and their troops as well as technical services. It was this structure that also granted military intelligence a more stable place in the complex, branched military tree. Still, this stability remained temporary; the establishment of a general staff was not enough to fully centralize and standardize intelligence collection. In 1908, for instance, G-2 (including MID) merged with G-3, the branch tasked with directing the War College Division. This fusion relegated G-2’s intelligence activity to an inferior Military Information Committee, which served only the War College Division rather than the whole Army. Despite the accomplishments of its attaché system, the Committee produced very little intelligence.\textsuperscript{34}

It was the dispersion of intelligence activity across other departments that ultimately hindered military intelligence’s total centralization at the beginning of the

\textsuperscript{32} Bigelow, July - September, 10.
\textsuperscript{33} For more information on the history of military attaché systems, see Alfred Vagts, \textit{The Military Attaché} (Princeton University Press, 1967).
\textsuperscript{34} Bigelow, July - September, 12.
twentieth century. Departments such as the United States Signal Corps also conducted intelligence activities, further splintering collaborative efforts.

**The Signal Corps and the Start of Organized Communication**

Like the General Staff, the United States Signal Corps began as another branch that conducted activities to assist the armed forces. Their main goal was to develop and improve communication technologies, which was essential for successful information-collection. Wartime conditions necessitated a strong communication system:

> Not only did the message have to be spoken, heard, written, or read, but also it had to be received without interference from others; it had to be sent and received over long distances; it had to arrive on time; it had to be so precisely transmitted that it left no room for doubt, or so deliberately garbled and obscured that only those intended to understand it could do so.\(^{36}\)

The Signal Corps, called the Signal Service prior to the end of the nineteenth century, would be integrated into the War Department just before the Civil War to conduct the army’s communication efforts into the twentieth century and during World War I. Nevertheless, demobilization after the First World War would make it difficult to sustain the Signal Corps’ technological advancements.

The story of the Signal Corps begins with a doctor. Dr. Albert J. Myer, an assistant army surgeon in Texas, wrote a letter to Secretary of War Jefferson Davis in 1856 and proposed the establishment of a flag signaling system during the day and torch system at night, known as the “wigwag system.”\(^{37}\) While specific mechanisms

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\(^{35}\) Finnegan and Danysh, 4.
\(^{37}\) There is no evidence prior to Myer’s correspondence with Davis that reveals any previous interest in signaling. There is suspicion, however, that Apache and Comanche signaling influenced his proposal. See Paul J. Scheips, "Albert James Myer, an Army Doctor in Texas, 1854-1857," *The Southwestern Historical Quarterly* 82, no. 1 (1978).
of the system remain unclear, Myer argued that his signal system could be used during the Civil War for communication between detached groups and across “impassable ground, over rivers, or arms of the sea.” Myer’s bids to the War Department for official institutionalization were mostly ignored until 1859, when he proposed his signaling system to an army board directed by Colonel Robert E. Lee. The board approved of his system for field tests, and Myer, then a major, became the first Chief Signal Officer of the Army on June 27, 1860. During the Civil War, Myer developed the Signal Service “as the vehicle for his second great accomplishment, the development of the weather service.” While eventually instrumental in the development of technologies such as the airplane and the radio, the Signal Corps focused primarily on meteorology in the 1870s. Despite skepticism from Secretary of War Edwin M. Stanton regarding the Service’s merit as an essential department, the Signal Service was granted bureau status in the War Department in 1875, thus warranting a name change. On February 24, 1880, the Signal Service became the Signal Corps.

The Corps experimented with pigeons, military ballooning, telephoning as “private interests took over the telegraph lines,” and wireless communication—“the newest wonder”—by 1899. By 1903, the same year as the establishment of the Army’s General Staff, the Signal Corps had constructed stations for a “space telegraph—in those days an excellent description of radio.” In 1907, the Corps took

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38 Ibid.
39 Meteorological data, such as tide and weather patterns from arctic expeditions led by the 1887 Chief Signal Officer Adolphus W. Greely, would be transferred to the Department of Agriculture’s Weather Bureau in 1891. Ibid., 10.
40 Terrett, 10.
41 Ibid., 11.
advantage of “the emergence of a science of electronics” and established an Aeronautical Division just prior to the aviation success of the Wright brothers in 1908. Interestingly, the Signal Corps’ technological advancements of the early twentieth century occurred at the historical moment “when scientific research tended to become as important in the mission as utilitarian skill.” The Corps invested in early attempts to produce radar services in the 1930s while experimenting with electromagnetic airplane radiations and thermal detection.42

Despite the Corps’ efforts at the beginning of the twentieth century, American signaling capacities, both on the ground and via airplane, would remain technically unsophisticated relative to British and French systems after World War I. An efficient American military radio network was not installed quickly enough to serve as a primary communication source during the war, as its technology was too new. Dulany Terrett, author of the military’s official history of the Signal Corps, writes that the Corps would have needed to be thirty-five times larger to complete its wartime mission, as Americans relied heavily on European technologies and services. In 1916, “the Corps was smaller even than when it had taken part in the Spanish-American War,” with only forty-two officers and 1,212 enlisted men. As a result, the Corps recruited men from sixteen commercial communications companies to supplement their existing men. By the end of the war, the Corps was only slightly larger. While the Signal Corps conducted a wide range of communication activities essential to information-gathering, the interwar period would bring disorganization and disbandment. The Signal Corps’ successes of the nineteenth and early twentieth

42 Ibid., 13-14, 20.
century were only temporary; the pattern of activity and subsequent demobilization would continue. Consolidation was on the horizon, but information-gathering activities remained isolated and dispersed throughout the military.  

**Interwar Demobilization and Disaster**

If World War I revealed some successes in the collection of information with new technologies during wartime, then the interwar period would necessitate soul-searching on the part of Signal Corps’ officials: what would an organized Corps look like during peacetime? How could one broadly define and maintain a permanent service dedicated to intelligence activities? The conclusion of World War I meant rapid demobilization of American troops and the military divisions that supported them. The National Defense Act of 1920 formally established a smaller Regular Army, Organized Reserves, and a National Guard controlled by nine continental corps and three departments overseas, yet these levels were not maintained. Both the failure on Congress’ part to provide the federal funds originally promised to the Corps, as well as the Great Depression, diminished the Army’s strength and organizational capacity during the interwar period. Initially, however, the future did not seem bleak. The National Defense Act of 1920 also mandated the restructuring of the General Staff, which temporarily granted military intelligence a more clearly-defined home. The peacetime consolidation of all General Staff sections into Operations, Military Intelligence (which still contained MID), War Plans, and Supply was encouraged for future wartime planning. The MID

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43 Ibid., 14, 16, 18-19, 20.
44 Finnegan and Danysh, 42.
was renamed the Military Intelligence Division (also MID) and was dedicated to counterintelligence during peacetime.\footnote{Watson, 67.} The replacement of information with intelligence\footnote{This is the first time that we see “intelligence” used in the title of an information-gathering agency or department.} in the Division’s title might have demonstrated that intelligence activities—a set of defined practices for information-gathering and analysis—were beginning to gain institutional recognition.

During peacetime, the MID was still legally responsible for military maps and drawings, tactical intelligence personnel regulation, cipher approval, and censorship operations; as an assistant to the chief of staff, the director of the MID formally held the rank of brigadier general. Nevertheless, intelligence lost its professional reputation as an Army Service when General John J. Pershing pushed intelligence officials to focus solely on public relations between wars. By 1934, MID had dwindled to approximately twenty officers and fifty civilian workers, and only two out of seven MID directors between 1922 and 1939 were actually given the rank of brigadier general.\footnote{Finnegan and Danysh, 42-43.} MID was often neglected in favor of other divisions and the outline provided by the Defense Act of 1920 was not fully upheld.

Additionally, the MID often performed tasks that were still considered peripheral to the military’s main operations. Finnegan notes that prior to the end of World War II, MID’s personnel conducted what he describes as “extraneous functions,” such as the management of public affairs, psychological warfare (or efforts to destroy enemy morale), and the collection of military histories. MID officers supported the war effort somewhat passively, acting “more as a reference

\footnote{Watson, 67.}
library than as a positive directing force.” Low demand for intelligence personnel as well as “the perceived absence of any real threat” during peacetime furthered the Division’s neglect. 48 Perceptions of military intelligence hovered between “peripheral” and a haven for rejects:

…intelligence work often became a dumping ground for officers incapable of performing any more demanding activities, and astute officers regarded intelligence assignments as detrimental to their military careers. According to intelligence historian Thomas Troy, ‘intelligence was neither a profession [n]or a career; at best it was a one-time activity in an army or navy officer’s service. Hence when closely scrutinized, the intelligence services [were] small, weak stepchildren of their parent organizations.’ 49

On all levels—domestically, internationally, financially, and socially—American intelligence efforts were weak during the 1920s and 30s. Attaché posts established for information collection, even in increasingly threatening totalitarian states, could not be federally supported and were unable “to collect useful intelligence in precisely those countries that posed the most dangerous threat to American security.” Training efforts and management of the Military Intelligence Officers Reserve Corps (MIORC) went unsupervised, and many of the officers who had previously worked in intelligence “were too old and too high-ranking to fill the positions the Army required” for future mobilization. 50

Even though the Signal Corps remained the home for the Signal School and the Signal Corps Laboratories at Fort Monmouth after World War I—an essential site for training and technological development—demobilization efforts and extreme budget cuts in all military sectors also forced the department to release its hold on

48 Ibid., 5.
49 Ibid., 43.
50 Ibid., 44-45.
unified communication practices. Individual army divisions of Infantry and Cavalry were granted responsibility for their own communication practices—returning to decentralized structures reminiscent of the Revolutionary War and the Civil War—and the Signal Corps re-adopted its status as a technical service.  

Other departments such as the Field Artillery, the Air Service and the Tank Corps established their own independent signal systems, as the Defense Act of 1920 had “wiped out most of the tactical interest of the Signal Corps and permanently moved its center of gravity away from classification as an arm and toward classification as a service.” Moreover, the Navy had established its own Naval Operations sector in 1922 and by the late 1930s, it had created and monitored many signal intercept stations in US, China, and the Philippines. The transition of communication responsibilities posed problems, as many members of the Infantry and Cavalry were not trained to use the Signal Corps’ equipment. This jeopardized the reliability of the collected intelligence. Ultimately, despite denouncements from the Chief Signal Officers and “universal” opinion “that communications must operate under single rather than divided control,” the six independent arms of the Army—including the Infantry, Cavalry, Field Artillery, Coast Artillery, Air Corps, and Signal Corps—continued to independently conduct intelligence activities. Major Jerry V. Matejka, a Signal Corps general during the Second World War, argued that intelligence training was “a specialized knowledge, and the men who master it need to know that they will be rewarded for their skill, not held back because, being

51 Terrett, 21, 24.
52 Ibid., 23.
signalmen, they do not command troops.” Matejka encouraged the re-establishment of Signal Corps officers to direct small Corps units “attached” to other Army branches when completing tactical missions; eventually, he argued, these small units would rejoin the larger Corps once the mission was completed. Per Matejka, the intelligence activities conducted by signalmen, for example, needed an institutional home.

During the interwar period, the unknowns of what a future war might look like complicated military officials’ plans for peacetime intelligence. Terrett also describes the chaos in maintaining a force adequate for potential war, as “there was dispute over such basic riddles as the reserve of materials: whether to plan for the maximum emergency or for whatever modest contingency Congress was likely to agree to.” Confusion ensued due to a myriad of unanswerable questions: “would the war be short or long? local or global? soon or never at all?” Planning efforts by the Signal Corps needed to address these questions in order to correctly allocate resources, gauge manpower, and prepare transportation in advance.

Interwar decentralization, along with the rapid advancement in technology worldwide, kept the US military behind in the intelligence game, as research and development efforts were not sustained. Stripped of their responsibilities, the Signal Corps had trouble keeping up. Terrett explains, “The man who had been expert in 1918 was ignorant in 1928 unless he had kept himself informed of the new devices and methods.” Training was difficult, as sparse resources were split between

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54 Terrett, 24.
55 Ibid., 64.
56 Ibid., 59.
developing a curriculum, as well as performing the Corps’ daily responsibilities.

Morale among officers and men was low: during the interwar period, “the day was sufficient without a tomorrow, especially a threatening one; but awareness of the next day, the next fiscal year, the next war never disappeared… Although the Army might recede from the public mind, the public would nevertheless expect it to be equipped on demand for an emergency.” 57 This points to an issue of consistency. A lack of interwar planning left the possibility of future mobilization incredibly tenuous.

The 1930s and Early Modernization in the Signal Corps

Despite low morale and demobilization after World War I, the early 1930’s brought about further reorganization of the Signal Corps, and Chief Signal Officer George S. Gibbs ordered the closing of the Washington, D.C. headquarters. This decade at the end of the interwar period brought a level of specialization of intelligence personnel never before seen in the military. Four laboratories were moved to Fort Monmouth in New Jersey—previously known as Camp Alfred Vail and already an established training center. The Signal Corps was then comprised of seven separate divisions: Personnel, Research and Development, Supply, War Plans and Training Division, Plan and Traffic, Photography, and Meteorology. 58 More specifically, the War Plans and Training Division recruited officers from with a diverse set of backgrounds— from the Massachusetts Institute of Technology, Harvard Graduate School of Business Administration, the Yale Sheffield School of Electrical Science, film experts in Los Angeles, the General Staff School and Army Industrial College—“all as part

57 Ibid.
58 Ibid., 71.
of the very real trend to specialize the officers of the Signal Corps.”

There were also some efforts to continue scientific research in the laboratory concerning thermal detection, wireless communication, optic signaling, radio technology, meteorology, and most importantly, enemy detection devices. Unfortunately, the Signals Corps was not granted the luxury of Congressional research funding, as the Navy had been. (The Army emphasized civilian training and the Navy emphasized officer training due to a larger allotment of funds.) Signal Corps research needed to be limited, as experimentation “had to be directed toward an immediate application, toward developing a specific and practical piece of equipment.”

However, according to William Friedman, a military cryptanalyst discussed in length later in this chapter, “all the important developments in both the cryptographic and cryptanalytic fields must be credited to Army personnel.”

Cryptanalysis, or codebreaking, emerged as another activity destined for a consolidated intelligence agency.

During the interwar period, the practical importance of the Signal Corps as a “communications industry right within the Military Establishment” was overlooked by many who scoffed that, “there was ‘nothing about telegraph, telephone or radio that require[d] special training in time of peace…” Nevertheless, the Office of the Secretary of War and the Chief Signal Officer joined forces in their creation of the 1923 War Department Message Center to collect, receive, send and distribute all

59 Ibid.
60 Ibid., 44.
62 Terrett, 48.
messages—an important step “in systematizing Army administrative communications.” The Signal Corps oversaw the Center, which “rapidly became [its] vital organ.” The interwar period was especially challenging for military officials contemplating essential peacetime programs. No one knew what the future would bring or which capabilities would soon become necessary.

**Codebreaking: A Case Study**

Within the larger framework of American military intelligence divisions and communication services of the Signal Corps, the overlapping and intertwined stories of two pioneering cryptanalysts, William F. Friedman and Herbert O. Yardley, illustrate a particular kind of intelligence activity and its uneven history of consolidation during the twentieth-century.

Between 1916 and 1918, the most prominent organized codebreaking activity occurred under the direction of George Fabyan, director of Riverbank Laboratories, a private research institution in Geneva, Illinois. Fabyan hired William Friedman, a trained geneticist and photographer on the side, to help analyze Shakespearean folios in search of ciphers. Friedman’s seemingly innocuous activity at Riverbank helped establish what would become a key cryptography training site during World War I.

Fabyan, a millionaire and businessman, published a variety of books on codebreaking while at Riverbank including *Hints to the Decipherer of The Greatest Work of Sir Francis Bacon* (1916) and *Fundamental Principals of the Baconian Ciphers and Applications to Books of the Sixteenth and Seventeenth Centuries* (1916).

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63 Ibid., 50.
Fabyan was “a bit obsessive, a great salesman and self-promoter, something of a megalomaniac,” and according to the subtitle of his biography, “The Tycoon Who Broke Ciphers, Ended Wars, Manipulated Sounds, Built a Levitation Machine, and Organized the Modern Research Center.” The establishment of Riverbank (one of the first private American research institutions) in 1912 stemmed from Fabyan’s interest in ciphers, sound, and Shakespeare. Fabyan’s “most important contribution to American cryptology,” however, came in 1917 when he offered to decrypt messages and train Army cryptanalysts during World War I. Friedman ultimately trained the cryptanalysts, which inspired his publication of The Index of Coincidence and its Application to Cryptography.65

Herbert O. Yardley, previously a code clerk and telegrapher for the State Department, became First Lieutenant in the Signal Officers’ Reserve Corps in June of 1917, and later Head of Section 8 of the Military Intelligence Division—or more commonly, MI8—on October 5, 1917.66 Remarkably, Yardley’s “capacity for immersing himself in cryptological problems, even while asleep, has ever after been known as the Yardley Syndrome among cryptanalysts.”67 MI8, also known as the Code and Cipher Section of the Cipher Bureau, resided in Washington D.C.’s Army War College, and examined “all secret communications coming to the attention of the War, Navy, State, and Justice Departments, Postal Censorship, and other official and semi-official agencies.”68 At its peak in November of 1918, MI8 employed 151

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people: eighteen officers, twenty-four civilian cryptographers, and 109 typists and stenographers.⁶⁹

In 1919, Yardley returned to Washington from a trip to Europe (where he had been assigned “to organize code and cipher communications between the American Commission to Negotiate Peace in Paris and MID”) and discovered that MI8 had essentially been dismantled.⁷⁰ Due to post-war demobilization efforts, Friedman, who was named the Signal Corps chief cryptanalyst in 1922,⁷¹ assumed control of all “communications security” and the responsibilities of MI8 “were reduced to approving cryptosystems for Army-wide use and establishing regulation for their employment.”⁷² The stories of Yardley and Friedman are examples of military intelligence’s search for an institutional home, and they represent the consistent ebb and flow of organization and disorganization during wartime and peacetime, respectively.

Yet Yardley and Friedman, among others, were some of the first to strongly advocate for a continuation of cryptographic and other intelligence activities during peacetime. These efforts represent the origin of the modern understanding of intelligence as established and permanent. In 1919, Brigadier General Marlborough Churchill, Director of Military Intelligence, supported these efforts and argued to the Chief of Staff that the continuation of intelligence research meant the difference between peace or imminent war:

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⁶⁹ Ibid., 6.
⁷² Finnegan and Danysh, 46.
If it is worthwhile to know exactly what instructions foreign powers give to their representatives at Washington, it is important to maintain M.I.8 with a sufficient personnel in time of peace. If the impressions and opinions of diplomatic representatives at other capitals and the instructions they receive as to attitudes and actions are of importance for the maintenance of peace, the cheapest, indeed the only, way to keep constantly and promptly informed on these matters is to present M.I.8 with a suitable personnel. Intimate knowledge of the true sentiments and intentions of other nations may often be an important factor in determining whether we are to have peace or war.73

Similarly, Friedman was a fierce advocate for peacetime research, development and training because cryptanalysis had “no counterpart in civilian life” and “skill in cryptanalysis [could] hardly be developed in a short time” nor “improvised in a hurry.” In requiring a “concentrated effort,” Friedman demanded that recruits have “at least five years experience and training” to handle the difficulties of “modern, up-to-date secret communications.” As part of his efforts for permanence, he argued, “actual or physical warfare is intermittent, but mental, that is, cryptanalytic, warfare is continuous,” and its success depended on consistency. Friedman advocated against what many Army generals had done after past wars: rapid demobilization of intelligence in preparation for peacetime, which provided a “false sense of security.”74

Although General Churchill and Army Chief of Staff General Peyton C. March agreed with those who advocated for the continued funding of intelligence activity by the State Department75 and the Army, the Army’s budget was simply not

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74 Friedman, 270.
75 While State Department intelligence efforts are not the focus of this project, the State Department did conduct intelligence activities. However, it did not establish its own Bureau of Intelligence and Research (INR, a predecessor of the Research and Analysis Branch of the OSS, to be discussed in Chapter Three) until 1947. The INR focused predominantly on foreign policy. See Caryn E. Neumann, "Department of State Bureau of Intelligence and Research, United States," in Encyclopedia of Espionage, Intelligence, and Security ed. K. Lee Lerner and Brenda Wilmoth Lerner (Gale Group, 2003).
large enough to support sustained intelligence operations. As a result, it was decided that the State Department would assist in offering funds to a small peacetime Cipher Bureau. The Navy declined to participate, arguing that “the organization would be short-lived.” Yardley, using his charm and a convincing sales pitch, successfully advocated for the establishment of a “permanent organization for code and cipher work’ to be funded jointly by the War and State Departments.”

Due to a “legal quirk” that prohibited State Department funding from being distributed to an endeavor in Washington D.C., Yardley and his small intelligence team moved to New York in 1919. Reduced to a mere nine cryptologists and seven clerks, Yardley directed the peacetime agency—the Cipher Bureau—that functioned under the alias of “Code Compiling Company.” Yardley’s Bureau was known as the “American Black Chamber” because the term “black chamber” referred to “a secure place where confidential messages were decoded and deciphered.” The agency published and sold commercial code books to conceal cryptographic research from the public. The Cipher Bureau, functioning under the Communications Section of the MID, focused primarily on intercepting and analyzing foreign diplomatic communication, particularly from Japan. It also intercepted messages sent via commercial telegraph companies including Western Union and Postal Telegraph. Translated messages were forwarded to the State Department, and cryptologic research continued on a smaller scale.

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76 Kruh, 67.
77 Brown.
79 Kruh, 67.
80 Brown.
81 National Security Agency, 8.
According to Louis Kruh, a cryptologist and author, the success of Yardley’s Bureau was significant: “The Cipher Bureau broke the codes of at least 20 countries and solved more than 45,000 cryptograms in its 12 years of existence.” Kruh notes that “its pinnacle of success was undoubtedly the breaking of the Japanese codes,” which proved essential for US representatives at the Washington Disarmament Conference from November 1921 to February 1922. It was at this conference that many of the world’s largest powers—including the US, Great Britain, Japan, France, Italy, and China—“discussed limitations of their relative naval strengths.” American representatives at the Conference were updated daily, via Yardley’s intelligence efforts, with translations of the instructions given to the Japanese negotiators. This proved key to their success in negotiating peacetime treaties. Codebreaking, as a case study, represents some of the first large victories in maintaining some consistency in intelligence activity. Our modern conception of intelligence as a permanent collection of activities supporting information-gathering and analysis is apparent in these small, tentative steps toward consolidation. As usual, however, this progress was not without setbacks caused by the military’s inability to see intelligence as an independent part of its operations.

**Yardley and The American Black Chamber**

On October 31, 1929, new Secretary of State Henry L. Stimson ordered the closing of Yardley’s New York City Cipher Bureau. President Herbert Hoover had appointed Stimson, a former Secretary of War, as Secretary of State in after his inauguration of

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82 Kruh, 67.
March of the same year. When Stimson first entered office, he was unaware of the Cipher Bureau’s existence, as he was not privy to their “bulletins” that contained translated texts from foreign sources. State Department officials chose to wait to disclose the responsibilities, methods, and accomplishments of the Bureau until “it was felt Stimson had had an opportunity to become sufficiently familiar with his responsibilities to appreciate the importance of the information.” After receiving Japanese intercepts, however, he immediately labeled the Bureau’s activity as “highly unethical” and announced his aim to shut it down.

According to Kruh, there are two explanations for Stimson’s immediate disapproval of Yardley’s work: Stimson’s highly moral agenda and his belief that all code work was irrelevant to State Department activity.

Kruh argues that during the 1920s, the American desire for peace was reflected in the strong movement to demobilize, and Americans believed “that the real force for peace in the world was moral, not military…” The transition “away from might and toward right” was important to Stimson, and he viewed codebreaking and other such activities as immoral. Stimson expressed his feelings during an interview with McGeorge Bundy (the author of his biography, On Active Service of Peace and War), advocating for “absolute freedom to communicate… free of espionage.”

Stimson’s view of the distribution of duties between the State and War Departments also motivated his decision to cut funding for Yardley’s Cipher Bureau.

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83 Brown.
84 Kruh, 68.
85 Ibid., 69-70.
He believed that collecting signal intercepts, interpreting foreign codes, and conducting espionage were activities only appropriate for the War Department. Thus, Stimson thought that the State department should have no business in a “nefarious practice”\(^\text{86}\) and argued:

> We have got to find some way of defending ourselves against those uncivilized nations without impairing the structure that we have built up… The question of coordination of legitimate information? That would be a State Department function. Information which would help the Secretary of State in maintaining peaceful relations of the United States ought to be in his hands.\(^\text{87}\)

Stimson’s desire to maintain a *civilized* State Department that was uninvolved in Army code work provided the impetus for his 1929 decision.

It is unclear whether Stimson acted alone; in fact, Friedman later noted that Yardley, at some point during 1932, had hinted to him that it was President Hoover who had ordered the Bureau’s closing. (Hoover, too, had already expressed his desire for “absolute integrity.”) Nevertheless, in Stimson’s biography, published in 1971, Bundy writes: “‘…Colonel Stimson himself ordered the dismantling of the Black Chamber; he may have done so after consulting Mr. Hoover [*sic*], but the initiative was his, and he has always been proud of it.’”\(^\text{88}\)

It is now said that Stimson made his decision with the rationale that “Gentlemen do not read each other’s mail.” Kruh mentions, “as Secretary of State, [Stimson] was dealing as a gentleman with the gentlemen sent as ambassadors and ministers from friendly nations.”\(^\text{89}\) While it is unclear whether Stimson uttered this

\(^{86}\) Ibid., 81.
\(^{87}\) Ibid., 70.
\(^{88}\) Ibid., 72.
\(^{89}\) Ibid., 77.
famous line prior to its publication in his biography, the broad repercussions of his
decision would soon be undeniable.

In response to Stimson’s actions, Yardley published a book called *The American Black Chamber* in 1931, sparking domestic and international conflict. “The State Department responded to embarrassing queries with circumlocution, and the War Department lied forthrightly,” and even explicitly denied the existence of the Bureau. The Japanese government responded with suspicion and a tightening of military communication due to the release of “damaging disclosures concerning the most secret activities ever conducted by the Government.”

Yardley dedicated his book “to the Personnel of MI-8 and the American Black Chamber and to Our Skilful [sic] Antagonists, the Foreign Cryptographers, Who still remain behind the Curtain of Secret Diplomacy.” Not only did he brag about his talents in cryptanalysis, he also embarrassed and denounced American military cryptographic efforts. For example, Yardley wrote: “At last I found the American Army pamphlet on the solution of military ciphers.…The book was full of methods for the solution of various types. The only trouble was that the types of cipher it explained were so simple that any bright schoolboy could solve them.” Per David Kahn’s “The Annotated American Black Chamber,” however, much of what Yardley wrote in *The American Black Chamber* was incorrect or exaggerated. For example, Yardley writes: “During the [Naval] Armament Conference the Black Chamber had turned out over five thousand decipherments and translations.” Kahn notes in his annotated version that there were only 1,600. Moreover, Yardley started a passage

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90 Brown.
91 Friedman, 269.
with, “Through the records at Kirkwall, England…” and Kahn adds simply, “Kirkwall, Scotland.” If anything, Yardley’s The American Black Chamber pushed cryptanalysis into the public eye, provoking anger and mistrust, as well as curiosity.92

On May 19, 1929, only six months after the closing of Yardley’s Bureau, the Signal Intelligence Service (SIS) was established under the Signal Corps.93 Friedman, as chief of the SIS, attempted to rebuild intelligence efforts, and established the War Plans and Training Division within the Service. In reviewing old codes and compiling new ones, “cryptanalytic work was put on a firm basis of research and training, with emphasis on the latter” because there was no longer an intercept service collecting “raw material” to move forward.94

The SIS, with only seven employees (including Friedman) and operating on a tight budget, would eventually erect secret intercept stations with radio detachments at Fort Monmouth, New Jersey (1933); in the Philippines (1935); in Panama (1936); and in California, Texas, and Hawaii (1938). The radio detachments—illegal under the Federal Communications Act of 1934, which prohibited the disclosure of foreign communication—monitored messages sent between Rome and Tokyo, Berlin and Tokyo, and Japan and South America.95 Progress was not fully obstructed.

**Failures of 1941**

Intelligence activity prior to and during the interwar period was, at times, scattered among the MID and the Signal Corps; however, the formation of the SIS under

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93 Richelson, 80.
94 Friedman, 269.
95 Richelson, 80.
Friedman, which provided some intercepts to the MID, helped to solidify wartime intelligence as a permanent military structure. Armored and radio-equipped transportation drastically improved intelligence collection efforts, and the Army Signal Corps tested mobile radar technology to detect aircrafts and ships in 1937.96 Aircraft development, privileged by Congress for funding, also aided reconnaissance efforts.97

Despite the consolidation and collaboration of the MID, SIS, and the Office of Naval Intelligence (ONI) at the start of the Second World War, one major national disaster proved too much for the agencies. On November 27, 1941, MID issued a report titled “Recent Developments in the Far East,” which assumed the Japanese would soon attack Thailand and Southern Indochina. Both the MID and the ONI failed to predict what would eventually be known as “the greatest strategic intelligence failure in United States history.” Extremely tight Japanese security measures, as well as limited contact with Japanese diplomats, made information gathering at the US attaché site in Tokyo difficult.98

The success of Friedman and the SIS in intercepting Japanese messages (an operation called MAGIC) via the recreation of the Japanese diplomatic code machine (named PURPLE) offered some early insight into Japan’s correspondence with, for example, the Japanese Ambassador in Washington, D.C. After decoding numerous intercepts suggesting an imminent Japanese offensive, PURPLE decoded a series of messages in early December of 1941 that undoubtedly indicated war; however, the

96 Finnegan and Danysh, 45.
97 Ibid., 46.
98 Richelson, 116.
naval base at the Hawaiian territory of Pearl Harbor was not suspected as the target. It was not until the day of the attack—December 7, 1941—that intelligence officials came to understand that Pearl Harbor was the likely target, and any attempt at a warning was too late.\textsuperscript{99}

The failure to identify the target of the attack is now understood as a failure of the intelligence system, most likely because of its instability. Historian David Kahn argues that the failure to foresee the devastating attacks at Pearl Harbor was due to shortcomings in information collection. Author Jeffrey T. Reichelson argues that the problem rested less in the \textit{collection} of information, and more in its \textit{analysis}: “it was clear to both Japanese and American leaders that Japan could not hope to win a prolonged all-out conflict with the United States” and thus Americans “tended to dismiss the prospect that Japan would undertake a suicidal direct attack on the United States.”\textsuperscript{100} Either way, the US failed to stop the attack. Following the devastation at Pearl Harbor, with the United States’ entrance into war assured, American intelligence efforts continued to prioritize technological developments. Much of the research conducted prior to and during World War II focused on the development of highly-advanced radar technologies.

The Second World War marked the need for and the establishment of “the modern intelligence cycle,” characterized by the consistent determination of needs, the collection of relevant information, and the appropriate publication of results both during times of war and peace.\textsuperscript{101} The history of intelligence as an \textit{activity} is one of

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\textsuperscript{99} Ibid. \\
\textsuperscript{100} Ibid., 123. \\
\textsuperscript{101} Finnegan and Danysh, 4-5.
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espionage, developments in communication technology, and codebreaking victories, as well as demobilization, inconsistency, and failure. It was not until 1942, however, that a centralized military intelligence agency recognizable to us today, was established. The Office of Strategic Services (OSS), an independent and permanent agency dedicated to covert foreign intelligence, paved the way for the creation of the CIA, and thus represented a strong example of the consolidation of American intelligence activities. Chapter Three explores the establishment of the OSS and the assessment and training practices that permitted the enormous escalation of its personnel in preparation for the Second World War. First, however, Chapter Two addresses the history of another conception of intelligence that would eventually aid in the development of the OSS: intelligence as a psychological concept.
During the Second World War, intelligence testing in the psychological field would come together with our understandings of intelligence in the military context. To fully understand this encounter it is first necessary to understand the genesis of intelligence testing. World War I represented an earlier interaction between the US Army and intelligence testing. However, the disorganized and scattered nature of intelligence activities impeded the use of any unified test for the evaluation of specialized intelligence agents.

This chapter tells two stories. First, it traces the concept of intelligence as it emerged in psychology in the early twentieth century. This history was heavily shaped by the eugenics movement. Second, Chapter Two emphasizes how this eugenically-constructed conception of intelligence fit naturally within the military context during the First World War. Psychologists crafted a narrow conception of intelligence that ignored athletic ability, manual dexterity, and other potentially valuable characteristic; intelligence was synonymous with general fitness. This particular eugenics-based conception worked well within the hierarchical structure and generalist culture of the Army during the First World War. This narrative provides as an interesting point of comparison to OSS assessment in the Second World War.

At the start of the twentieth century, as the military saw the beginnings of consolidated intelligence activities, discussion regarding the categorization and
explanation of human difference gained attention in the scientific community.
American psychologists obsessed over finding a single metric that could effectively and efficiently evaluate all human behavior. The discovery of an irrefutable factor that might quantify human differences created and maintained strict hierarchies of race, class, gender, sexuality, and ability. What characteristic might have painted a holistic picture of an individual in twentieth-century America? This was the question that psychologists set out to answer. Psychologists attempted to define an elusive concept, one that has remained a topic of intense debate among communities dedicated to studying the human mind: intelligence. They built quantitative tools to measure human intelligence, grounding their “objective” results with indisputable data that would serve their larger goals. The abstract concept of intelligence, it seemed, would fit the bill.

In 1904, Charles Spearman published “‘General Intelligence’ Objectively Determined and Measured” and argued that “all branches of intellectual activity have in common one fundamental function (or group of functions).”¹ In other words, one common factor, g, accounted for an individual’s intelligence. Spearman, a student of Eugenicist Francis Galton, echoed the beliefs and sentiments of a prominent class of nineteenth- and twentieth-century scholars who revered inheritance as the chief explanation for human behavior. These beliefs provided a foundation for the eugenics movement that sank deeply into emerging psychological, scientific, and cultural theories. Prevailing notions of intelligence at the start of the twentieth century had become inextricably linked with eugenics—the scientific and cultural movement that

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advocated for controlled breeding, which would “improve” the population by eliminating innately inferior populations. Due to the expansion of school systems and training institutions, growing concerns with “feebleminded” or “retarded” populations, and a looming war, several psychologists focused not only on *defining* intelligence as a valuable human characteristic. They also focused on developing efficient and universal tools—mental tests—to quantitatively measure intelligence in favor of their eugenic theories.

It is therefore impossible to understand the development of mental testing in the United States without referencing the essential influence of eugenic theory on the psychologists that produced the tests. The eugenic belief in innate superiority required the presence of a detectable, heritable trait. The development of intelligence tests in the twentieth century, which reduced human intelligence to a single numerical value, presented American psychologists with a classification tool perfectly suited to rank human potential.

America’s involvement in World War I provided a new setting in which psychologists could test and apply their approaches to human evaluation. The introduction of intelligence testing in the army aimed to efficiently assess enlisted soldiers and officers. Testing would determine a soldier’s most appropriate rank. Quick mobilization for large-scale war, which pushed military officers to seek help from any willing outside specialists, offered a chance for psychologists to “sell” their new, narrow evaluation approach. This forced the confrontation of the emerging notions of psychological intelligence and military traditions.
The military’s adoption of intelligence testing was cautious, due to skepticism in the ability of a single metric to encapsulate human potential. Nonetheless, the implementation of intelligence testing during World War I would push psychological theories of intelligence—a field of study previously shielded from public view—onto a prominent stage in American society.² This chapter discusses the introduction of a linear, eugenics-based and eugenics-serving evaluation model into the military setting in the early 1900s that satisfied both the needs of psychologists and military officials. This chapter also examines how these eugenic notions of intelligence operated uneasily within the military context.

An examination of the American military’s use of mental testing during World War I is a case study. It represents only one chapter within the larger narrative that I am tracing in this thesis: the story of how the psychological quest for evaluating humans interacted with American institutions. I argue, however, that the military institution was more likely than others to embrace the single definition of intelligence proposed by psychologists. The strict, hierarchical nature of the military provided an accommodating space for an assessment model that aimed to establish a strict human order.

**Binet and Intelligence as Judgment**

Intelligence was not always measured with a linear scale. The history of the psychological concept of intelligence in the twentieth century and the development of early assessments (particularly the IQ test) illustrates this variable history.

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The story begins in France with Alfred Binet. Binet, a self-taught French psychologist, is often considered “the father of the IQ test” (although he is more accurately the grandfather of the IQ test, as it was invented later by American psychologist Lewis Terman). His association with IQ, however, stems from his important work in the field of mental testing. Binet collaborated with Theophile Simon to develop what would eventually become a widely-adopted and adapted scale for measuring intelligence that preceded the IQ test. Binet’s definition of intelligence, first published in 1905 in L’Année Psychologique (the first French journal dedicated to psychology and co-founded by Binet himself), emphasized a “fundamental faculty, the alteration or the lack of which, is of the utmost importance for practical life.”\textsuperscript{4} In the publication, subsequently translated by Elizabeth S. Kite and published in the US in 1916, Binet argued that intelligence was determined by judgment, “otherwise called good sense, practical sense, initiative, the faculty of adapting one’s self to circumstances.” Contrary to modern perceptions of intelligence, he writes: “A person may be a moron or an imbecile\textsuperscript{5} if he is lacking in judgment; but with good judgment he can never be either” and other intellectual faculties “seem of little importance in comparison.”\textsuperscript{6} Despite Binet’s rather clear definition of judgment-based intelligence, he believed that other factors influencing intelligence, while perhaps less important, should be considered.

\textsuperscript{5} The terms “imbecile,” “idiot,” and “feebleminded” refer back to a nineteenth-century vocabulary used to classify human ability. Only a “few defects” differentiate these categories. It can be assumed that these terms were often used synonymously. P. Martin Duncan, A Manual for the Classification, Training, and Education of the Feeble-Minded, Imbecile, & Idiotic (1866).
\textsuperscript{6} Binet and Simon, no. 11., 42.
Nevertheless, as mental retardation increasingly became a subject for study, particularly in children, Binet was hopeful that a mental test would “provide an objective procedure for the differential diagnosis of idiots, imbeciles, morons (debiles) and normal individuals.”

Binet was most concerned with subjects on the “lower end of the distribution of ability.” In 1907, he wrote that “a matter of true social interest… made it mandatory for us to measure intelligence by the psychological measure.” Binet’s motivation came from a desire to help a “mentally inferior” population that he perceived as oppressed by the larger education system. In her 1906 translation for the Committee on Provision for the Feebleminded, The Binet-Simon Measuring Scale for Intelligence, Kite described that Binet “saw the difficulties that stood in the way of securing a just basis for commitment to a special class. He realized that if left to personal impression, to feeling or to any form of subjective appreciation, injustice would inevitably creep in.”

In accordance with Binet’s own professional goals, the Ministerial Commission for the Study of Retarded gave Binet an assignment: he was to craft a method to scientifically discern “the anthropometric and mental differences that separate the normal child from the abnormal” in the French school system to support alternative education programs. Additionally, Binet was tasked with “making these differences exact, of measuring them in some way so that their assessment cease[d] to

9 Siegler, 181.
be a matter of tact and intuition, but rather... something objective and tangible.”\textsuperscript{11}

The goals of the French government, however, would not yet completely detach Binet’s scale from his underlying respect for multi-dimensional intelligence. Binet said that the Commission “was appointed to do a work of administration, not of science.”\textsuperscript{12}

The Binet-Simon test was comprised of 30 tasks of increasing difficulty borrowed from other educational research projects as well as popular games. It measured the “rough mental level” of the tested child based on the number of tasks that he or she could complete successfully.\textsuperscript{13} Examples of tasks varied dramatically: individuals could be asked to copy a square on paper; repeat the phrases, “It rains. I am hungry”; compare the length of lines; exemplify “Patience”; “Choose [the] prettier face in 1 & 2; 4 & 3; 5 & 6”; construct a sentence in one minute using the words, “Philadelphia,” “Money,” and “River”; define “Charity,” “Justice,” and “Goodness”; and “Resist suggestion.”\textsuperscript{14}

The scale deduced from the test results was officially published in 1909 in \textit{L’Année Psychologique}. It was not the first time that an idea for a “workable scale for school-aged children based upon level of mental development” had been conceived; nevertheless, it was the first of its kind to be officially published and widely disseminated.\textsuperscript{15} While initially testing an “unrepresentative sample” of only fifty children, “10 each of ages 3, 5, 7, 9 and 11 years,”\textsuperscript{16} the Binet-Simon scale and its

\begin{footnotes}
\item[11] Dahlstrom, 70.
\item[12] Kite, 5.
\item[13] Dahlstrom, 70.
\item[14] Kite, 8-9.
\item[15] Dahlstrom, 70.
\item[16] Siegler, 181.
\end{footnotes}
revisions in 1908 and 1911 would serve as an important template for further
developments in intelligence testing. (The tasks of Binet’s revised tests were
organized by age scales, as to avoid administering questions that were too easy or too
difficult.\textsuperscript{17}) The Binet-Simon approach existed in stark contrast to more qualitative
approaches such as personal interviews or observation. The newly developed scale
was a tool of \textit{numerical measurement} that would provide the foundation for the most
widely used intelligence test in the world—the IQ test.

The extreme importance of the IQ test to Binet’s legacy, however, may
contradict his multidimensional approach to his intelligence research. R.S. Siegler
writes, “It is ironic that Binet’s contribution should be so strongly associated with
reducing intelligence to a single number, the IQ score, when the recurring theme of
his research was the remarkable diversity of intelligence.”\textsuperscript{18} Furthermore, Siegler
argues that Binet understood qualitative measurements to be the strongest indicators
of intelligence and thus “actively resisted equating the mental activity of people of
differing ages who performed comparably on test questions.”\textsuperscript{19} Binet’s testing model
was certainly a linear scale based on a developmental view of human intelligence. (In
other words, Binet’s scale worked to measure “mental age” by assessing the ability to
complete a range of prescribed tasks.) Nonetheless, Binet clearly acknowledged the
limitations of this narrow system. Ironically, the Binet-Simon scale—the basis for
IQ—was not adopted or recognized by the French until the 1930s; it would find its
strongest supporters in the US.\textsuperscript{20} The scale’s journey across the Atlantic was a true

\textsuperscript{17} Dahlstrom, 70.
\textsuperscript{18} Siegler, 179.
\textsuperscript{19} Ibid.
\textsuperscript{20} Ibid., 181.
departure from the French psychologist’s initial goals.

**Mental Testing Comes to America**

The history of mental testing in the United States begins with the evolution of “scientific psychology” in the nineteenth-century, when the prevailing notions of intelligence found their roots in evolution. Social Darwinism, the use of “natural law” to explain social order, emerged as Darwin’s theory of biological evolution expanded to encompass all human characteristics. The work of Francis Galton and his theories regarding the heredity of “genius” in the late 1800s put the field of psychometrics, or “the science of individual mental differences,” on the map. The eugenic emphasis on eliminating the “feebleminded,” and thus their “dangerous” genes, would supposedly mitigate crime and delinquency.

Research and inquiry into the nebulous definition of intelligence persisted into the twentieth century, and several psychologists embraced the challenge. A range in definitions, however, did not stop psychologists from attempting to measure it, mostly because it served their ultimate cause. Eugenicists approved of intelligence as a viable factor for understanding human potential because intelligence became synonymous with *general mental ability*. There was a clear difference between “developed” and “undeveloped” intelligence. William James, who taught psychology at Harvard University, used Herbert Spencer’s 1897 definition of intelligence:

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22 Ibid., 1.
23 This project leans heavily on the theoretical foundations set forth by eugenicists in the nineteenth and twentieth century. While I attempt to outline the trajectory of the broader movement, the details of the movement lie outside the bounds of this project. For a broad overview, I suggest: Michael Yudell’s *Race Unmasked: Biology and Race in the 20th Century*, New York: Columbia University Press, 2014.
Intellectual evolution, as it goes on in the human race... is thus, under all its aspects, a progress in representativeness of thought. By consisting of representations that are more extended, more definite, more varied, more involved, the conceptions of developed intelligence are distinguished from those of undeveloped intelligence.

In James’ classroom, students learned that more “developed” humans were fortunate to have a more varied—and thus superior—“representativeness of thought.”

If human behavior—including mental ability—was dictated by predetermined and unchanging factors, then humans could theoretically eliminate negative behavior via the elimination of “dangerous” or “contaminated” genes of the feebleminded or “underdeveloped.” The carriers of these genes needed to be identified. Still, definitions of intelligence were mixed. Cognitive psychologists of the same era defined intelligence as a behavioral property, like motivation and emotion. Some accepted that a human’s mental faculties “such as memory, judgment, will power, sympathy, intelligence, honesty, and the like” formed from the “mental chemistry” of “simple sensations and perceptions.”

One major human “phenomenon”—retardation in children—gained popular recognition as a “scientific and medical issue” in the late nineteenth century, and in response, training schools and institutions were established in the early 1900s for the “feebleminded.” Concern about “the menace of the feebleminded” would push the subject to the top of psychology’s priority. Sheldon H. White writes: “The feebleminded needed to be designated and controlled, some thought, and their concern was an important part of what motivated the early development of IQ testing.

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24 White, 34.
25 Dahlstrom, 66.
26 White, 36.
in the United States.” Consequently, it became clear that mental testing could be employed to control an ‘epidemic’ of feeblemindedness. Feeblemindedness was, then, designated as the opposite of intelligence. Ironically, intelligence tests tried to diagnose a lack of intelligence, rather than a richness.

American psychologist Henry Herbert Goddard pointed the national spotlight onto the standardized intelligence test, particularly that of Binet. Formerly a Quaker school teacher as well as a proponent of the evolving eugenics movement due to his strong belief in “the power of heredity,” Goddard was influenced by evangelical Christianity (for example, he studied “faith curing”), as well as Darwinian science.


Initially, Goddard was skeptical that intelligence would fit the goals of his eugenic-based mission. Goddard describes his initial reaction to the 1905 scale: “Probably no critic of the [Binet-Simon] scale… has reacted against it more positively than I did” because “it seemed impossible to grade intelligence in that way.” Goddard initially thought the scale was “too easy, too simple.” Nevertheless, he concluded that later successes of the test, demonstrated by the strong correlation

27 Ibid., 37.
29 Dahlstrom, 73.
between psychologists’ experiences and previous findings, came as “a surprise and a gratification.”

His gratification probably resulted from the discovery of a scale that would support his eugenic motives.

Goddard enthusiastically adopted the 1908 version of Binet’s scale, which he first published in 1910. His publication “was a direct translation with only a few simply substitutions of sentences made to adapt the procedures to American children.”

Goddard collected Elizabeth S. Kite’s translations of Binet and Simon’s works in his volume Classics in Psychology. The book, a collection of five L’Année Psychologique articles by Binet and Simon and published by the Training School at Vineland in 1916, mapped the origin of the scale and its revisions. In his introduction to the book, Goddard wrote that the Binet-Simon scale arrived in the US in 1906, the same year that the Vineland Research Laboratory was established “for the psychological study of feeblemindedness.” Goddard claimed to not have seen Binet’s work until a trip to Europe in 1908, after which he employed the tests on children at the Training School.

Unlike the “patient, thoughtful process of test development” in France, Goddard claimed that the Binet-Simon scale was adapted and adopted instantaneously and enthusiastically by American psychologists, partly due to his own dissemination efforts. The Vineland Laboratory, “without effort or advertisement,” printed and

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30 Binet and Simon, no. 11., 5.
31 Dahlstrom, 73.
32 Binet and Simon, no. 11., 5.
33 White, 38.
distributed 22,000 copies of the pamphlet describing the tests and 80,000 record blanks by 1910.\textsuperscript{34}

Goddard’s observations of the scale’s popularity were not completely exaggerated. While Goddard himself did not play a pivotal role in intelligence assessment during World War I, his efforts at Vineland would undoubtedly encourage the widespread use of intelligence tests in America. In 1910, physicians immediately adopted intelligence testing for patient classification, as “Binet’s invention offered doctors something they had been seeking for nearly a century: a set of uniform criteria for diagnosing different degrees of mental impairment”;\textsuperscript{35} in 1911, public schools began employing intelligence tests that eventually would “stratify students into different school ‘tracks,’ thus delimiting both their academic and their social mobility”;\textsuperscript{36} in 1913, mental testing began to be used at Ellis Island to screen immigrants as they entered the US; and in 1918, mental testing entered the military arena. Goddard—“especially proud of his own semantic contribution in inventing the word ‘moron’ in 1910”—successfully maneuvered the controversial practice of mental testing “out of the laboratory and into society.”\textsuperscript{37}

The introduction of standardized intelligence testing in America did not, in turn, standardize the definition of intelligence. Relevant concepts such as “heredity,” “environment,” and “intelligence” had still not been fully settled in the field, and mental testing was left vulnerable to sharp debate.\textsuperscript{38} Reactions to tests “coupled with

\textsuperscript{34} Binet and Simon, no. 11., 6.
\textsuperscript{35} Zenderland, 9.
\textsuperscript{36} Ibid., 10.
\textsuperscript{37} Ibid., 2, 9.
\textsuperscript{38} Ibid., 6.
controversies arising from the interpretation of data from the Army testing program in the next decade” dissuaded “liberal writers and politicians” from accepting the growing phenomenon.39

Despite ongoing discussions, the scale’s ability to simplify, or tame, the elusive definition of intelligence through diagnosis was particularly intriguing for many American psychologists. Zenderland writes:

psychologists such as Henry Herbert Goddard were trying to exercise power in ways previously unknown to members of their profession. They were in a position to do so precisely because Binet’s invention had offered them a new claim to expertise in an area with important social ramifications: diagnosing mental retardation. With tests in hand, psychologists argued that they were best able to ‘measure minds’ and therefore ought to be allowed to make decisions.40

Diagnosing “mental retardation” was the first step in its elimination. The implications of the Binet-Simon test and its revised versions following its American adoption in the twentieth century shaped an important new trend: whether psychologists truly accepted it, there now existed a measureable, unitary, and useful intelligence scale.41

IQ is born

Lewis M. Terman built the IQ test with the expectation that it would support the social hierarchy for which he and other eugenicists fought. Terman conducted statistical studies of Binet’s scale and in 1916, he published the results of his own revised version, called the Stanford-Binet scale. (In his studies, he tested 2,300

39 Dahlstrom, 74.
40 Zenderland, 11.
41 White, 33.
American children.) Terman’s goals, which he shared with other eugenic thinkers, emphasized the elimination of inferior minds via the measurement of superior ones.

Terman, an assistant professor at Stanford University beginning in 1910, added a “mental quotient” to Binet’s original format with the help of Stanford graduate students. Rather than providing a single score based on the number of tasks completed successfully as the Binet-Simon scale did, the “mental quotient” of a child was weighted based on the child’s age. Absolute discrepancies in the intelligence scores between children of different ages were irrelevant because “variability in test performance increases with advancing age.” In other words, a ten-year-old child performing at an eight-year-old level was considered less significant than a five-year-old child performing at a three-year-old level. Thus, a mental quotient is “the ratio of the measured performance level to the level expected for a child of that chronological age.” The Stanford-Binet test called this index of ratios describing relative standing the *intelligence quotient*, more commonly known as “IQ.” Terman’s data from 1916 was presented in terms of IQ.43

In his test manual, Terman argued that effective mental testing would stop the “reproduction of feeble-mindedness” and mitigate “crime, pauperism, and industrial inefficiency.” Terman eventually tested 1,000 “gifted” children and tried to prove that his new measurement techniques revealed their evolutionary superiority. He operated in an era when “retardation was thought to be a visible sign of a complex of degenerate proclivities.”45

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42 Dahlstrom, 77.
43 Ibid.
44 White, 38.
45 Evans and Waites, 2.
and Mental Testing: An Unnatural Science and Its Social History, write that “heredity influences have been investigated using quite a variety of psychometric tests, but the amount of research into the heritability of IQ exceeds by far the sum total of heritability research using other types of tests.”46 Use of the IQ test took off.

By this point, Binet’s conception of intelligence as determined predominantly by “judgment” was no longer relevant in the American context. Instead, his theories were deeply entangled in the eugenics movement. A wide range of new ideas and theories had been grafted onto Binet’s system; these were persistent ideas of “evolutionary order of intellectual development.”47 Alfred Binet was suddenly inextricably linked with the American “concept of intelligence as a single, pervasive ability to deal adaptively in the world.”48 The Binet-Simon scale and its successors such as the Stanford-Binet scale proved that the measurement of intelligence was “feasible and worthwhile.” Mental testing as an institutional practice had, itself, defined intelligence in one-dimension terms.

**Intelligence Goes to War**

Following the introduction of mental tests in the United States, psychologists looked for institutions to adopt them. The military, in preparation for World War I, was ready to embrace this new evaluation system.

The pressures of World War I necessitated mobilization on an unprecedented scale with unprecedented speed. Suddenly, the military could no longer rely on

46 Ibid.
47 White, 39.
48 Dahlstrom, 75.
traditional methods for evaluating soldiers that required time, careful observation, and thoughtful qualitative assessment. By November 1918, the military had expanded seventeen-fold: there were now over 3.5 million soldiers and more than 200,000 officers that needed management, placement, and assessment. Military officials, unprepared for this large-scale mobilization, were forced to turn to outside professionals for help. For the first time, Secretary of War Newton D. Baker introduced the necessity to incorporate a more quantifiable and “scientific” metric into military assessment practices in response to war. He remarked:

We have no time for men to grow up into these groups evolved by association, but we have to have a selective process by which we will get the round men for the round places, the strong men for the strong tasks and the delicate men for the delicate tasks. We have got to evolve a process by which that sort of assortment will take place… [S]ome system of selection of talents which is not affected by immaterial principles or virtues, no matter how splendid, something more scientific than the haphazard choice of men, something more systematic than preference or first impression, is necessary to be devised.

Baker equated the term “scientific,” with “systematic” or “objective.”

In what ways could the emerging practice of mental testing in psychology at the start of the century aid the military in improving recruitment and assessment, if at all? This was the puzzle Robert Mearns Yerkes attempted to tackle. In 1917, a group of psychologists called the “Society of Experimentalists” met at Harvard to brainstorm ideas for how to apply their knowledge and expertise to the military context.

Before Terman began his work on the Stanford-Binet scale in 1910, Yerkes—a psychologist, ethnologist, primatologist, and eugenicist—had also attempted to

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49 Carson, 200.
50 Ibid., 198.
51 Ibid., 200-01.
adapt the 1905 Binet-Simon scale. Yet rather than organize test tasks by mental-age groups, as the later revisions of the test had done, he maintained the original point-scale format. Yerkes’ adaption of the Binet scale, called the Yerkes-Bridges Point scale, set a “clear precedent for an alternative design of American intelligence tests.”

Yerkes began his campaign for “army-wide intelligence testing” on April 29, 1917 to support the national quest to eliminate unfit populations. The National Research Council of the American Psychological Association, of which Yerkes was President, established a committee of Vineland psychologists to discuss the outbreak of war and personnel testing, and “soon joined with the Adjutant General’s Office to apply psychological procedures to various military problems.” Yerkes presented a Plan for the Psychological Examining of Recruits to Eliminate the Mentally Unfit to Surgeon General William C. Gorgas of the Army Medical Corps. Originally, Yerkes’ ten-minute tests, administered by “trained experts,” were designed to determine recruits with intellectual deficits, “psychopathic tendencies, nervous instability, and inadequate self-control.” This investigation of the mentally inferior, similar to those previously seen in civilian psychological testing, “avoided the painstaking, hour-long examinations of prewar intelligence testing” and was met with enthusiasm by Gorgas in May of 1917.

The newly funded subcommittee—including Yerkes, Walter V. Bingham, Henry H. Goddard, Thomas H. Haines, Lewis M. Terman, Frederic L. Wells, and

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52 Dahlstrom, 75.
53 Ibid., 80.
54 Carson, 201.
55 Ibid., 203.
Guy M. Whipple—met twice during the summer 1917 at the Vineland Training School to discuss future trials of the Yerkes-Bridges and Stanford-Binet scales, as well as the Pinter-Paterson Performance battery and a “special Army performance scale.” The Vineland psychologists, under Yerkes’ direction, had assembled a test called Army a, and were prepared to test it out.

Capitalizing on the extraordinary wartime circumstances, Goddard enthusiastically introduced mental testing into the US military, hoping to continue propagating his views. A look at the military’s use of mental testing during World War I, then, is perhaps one example of the fight to institutionalize eugenics. Appropriately, a hierarchical model of human potential fit nicely in the hierarchical military context during exceptional times of war.

Prior to World War I, the military’s assessment of its personnel remained distinct from the emerging psychological theories of intelligence under examination in hospitals, schools, and courts. This is primarily because the US Army did not need to employ a “sophisticated” system for assessment. In March of 1917, the military consisted of only 6,000 officers trained at West Point and 200,000 career soldiers.56 Military officials were “able to place and rate soldiers based on long-term familiarity and to maintain and propagate a well-entrenched military culture.”57 A system such as those prescribed by Binet, Goddard, and Yerkes were not necessary in a community that relied on personal interaction and evaluation.

The military already utilized a specific set of criteria to assess soldiers and officers. Requirements for military service were clearly outlined: a potential soldier

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56 Ibid., 200.
57 Ibid.
needed to be between the ages of eighteen and thirty-five, a citizen (or an intended citizen), and literate in English; moreover, candidates “could not be convicted felons, deserters, insane, or intoxicated.” Before World War I, quantified mental ability was an unnecessary descriptive factor. A man’s character prevailed as the dominant and preferred evaluable trait. Other important characteristics included a candidate’s ability to lead or discipline others, skill and energy, judgment, and appearance. For example, one of Lieutenant Sylvester Bonnaffon III’s qualitative, character-based evaluations in 1903 described an officer as: “Resourceful. An excellent officer and of extremely courteous demeanor and gentlemanly bearing.” In 1916, Bonnaffon noted that another candidate was “A ‘Very Good’ officer. Has good habits. Cheerful disposition + a loyal subordinate.” In rejecting simple “intelligence,” Bonnaffon utilized a system of evaluation that was more akin to personality traits.58

At the start of the First World War, the situation changed. Psychologists adopted the battlefield as a suitable home for their pre-existing eugenic principles. In 1923, Carl C. Brigham, in collaboration with Yerkes, published A Study of American Intelligence. Brigham revealed how test results for thousands of men provided psychologists with the perfect means by which to study human intelligence: “the army mental tests give us an opportunity for a national inventory of our own mental capacity and the mental capacity of those we have invited to live with us.”59 This “national inventory of our own mental capacity” was convenient for a society coping with an influx of immigrants and for the first time. Americans had access to an organized set of demographic information, newly adorned with intelligence scores.

58 Ibid., 199-200.
The supposed objective nature of quantitative intelligence results supported eugenicists’ goal to craft a social order that subjugated “undesirable” races. This hard data legitimized their efforts. Brigham wrote that this data provided “a scientific basis” for conclusions in “the study of race differences in mental traits.”\textsuperscript{60} Brigham argued that prior to the twentieth century, most conceptions of racial differences remained biased because they exited “the solid realm of physical measurements” and “enter[ed] the more intangible field of estimating mental capacity.”\textsuperscript{61} In other words, Brigham claimed that prior to the establishment of mental tests based on quantitative measurements, the examination of racial differences consistently fell prey to the subjectivity of qualitative assessment. Brigham continued, however, and argued that the 1900s brought “a remarkable development” in intelligence theory, and this development would conveniently support the existing classifications of eugenicists.

\textit{Intelligence for Dummies}

Yerkes’ endeavor provided the efficiency that military officials wanted. The new military tests emphasized broad measurement and adaptability for national security and in the process, they eliminated the need for an expert examiner. Ironically, this psychological approach to intelligence testing represented a “dumbed down” version of intelligence testing and saved multiple hours of interviews and observation. The function of the psychologist and “the badge of expertise” transitioned from behavioral analysis to data analysis.\textsuperscript{62} Anyone could conduct a ten-minute interview that

\textsuperscript{60} Ibid.
\textsuperscript{61} Ibid., xix.
\textsuperscript{62} Carson, 204.
calculated IQ. In this way, the new system signified a *deskilling* of the psychological profession.

The Vineland psychologists agreed that the mechanism that would allow for the successful adoption of intelligence testing within the military was *serviceability*, or adaptability of “expert knowledge” in a new context. 63 Psychologists needed to convince the US Army that psychological testing would, in fact, prove valuable in two ways: mental testing needed to *efficiently* and *reliably* predict soldier and officer performance, while also fitting into a traditional military culture. Intelligence became a “particular product being ‘sold’ to the American military.” Yerkes argued that his “reasonably accurate and thorough information” would replace “chance, personal whim or bias, and convention.” 64

As Yerkes pushed for further adoption, Army *a* underwent its final transformation between December 1917 and January 1918 and was renamed “Army Alpha.” 65 By August of 1917, two tests—Army Alpha and Beta—had been assembled and tested to “identify those inductees who were potential candidates for officer training programs, for special assignments in various military units, or for non-combatant duties in labor battalions.” 66

*It’s Official*

Yerkes boasted of a semi-instantaneous improvement in military assessment after his psychological contribution. He described how the National Research Council was

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63 Ibid., 198.
64 Ibid., 197.
65 Ibid., 207.
66 Dahlstrom, 82.
surprised by his ambitious project and its subsequent success.\textsuperscript{67} On August 17, 1917, Yerkes became a Major in the Sanitary Corps of the Army Medical Corps, with a newly organized Psychological Division. Yerkes collaborated directly with Gorgas, the Office of the Chief of Staff, and the Office of the Adjutant General, which “marked the beginning of the army’s active engagement in the psychological examination of its recruits.”\textsuperscript{68}

Trial testing of Yerkes’ tests quickly continued at Forts Devens, Dix, Lee and Taylor, and a third trial with over 65,000 men provided information for 107 statistical reports. These results elicited mixed reactions from officers. Many argued, however, that the test correlated successfully with their own evaluations of soldiers. Some officers like Colonel John J. Bradley claimed that despite initially doubting psychology’s value to military efficiency, “A very thorough study of the reports submitted, however, has firmly convinced it that this examination will be of great value in assisting and determining the possibilities of all newly drafted men and all candidates for officers’ training camps.” Another officer noted that the correlation with officer rankings were “the indicator of the program’s value.” On January 16, 1918, psychological testing was introduced to the entire army and necessitated a staff of 132 officers, 124 non-commissioned officers, 620 enlisted men, and the construction of examination buildings.\textsuperscript{69}

John Carson’s \textit{The Measure of Merit: Talents, Intelligence, and Inequality in the French and American Republics, 1750-1940} provides a detailed summary of these


\textsuperscript{68} Carson, 208.

\textsuperscript{69} Ibid., 209.
interactions between psychological conceptions of intelligence and the military. Carson introduces an original method of writing about the assessment of people. He uncovers a set of discourses and languages for talking about human capability, intelligence, and character, and uses the military as his example. To do this, he offers a unique analysis of the language used in military reports.

Carson illustrates the fact that as World War I progressed, military reports that assessed personnel slowly incorporated remarks regarding intelligence: he presents linguistic evidence of this shift. It became clear that a rhetoric of “intelligence,” which supported eugenic theories, was slowly beginning to creep into the military lexicon. In 1918, Brigadier General L. C. Andrews described one candidate as “an excellent, well-equipped, all around officer, intelligent, and competent.” Lieutenant Colonel A. M. Shipp wrote: “while probably lacking the vision ever to become a brilliant officer… he has the qualifications and faithfulness to duty to make an excellent officer in command of a unit in a larger organization.”70 The main goal of military psychologists was no longer to simply weed out the mentally inferior; rather, the assessment program’s aim was also to highlight mental superiority and balance companies and regiments.71

The full transition to and adoption of Army Alpha was slow, due to residual ambivalence surrounding mental testing and its value in the military. Nevertheless, on April 28, 1918, the new tests for enlisted men and officers officially began. Army Alpha was given to literate recruits and Army Beta was given to illiterate recruits.

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70 Ibid., 199-200.
71 Ibid., 209.
The tests would evaluate over 200,000 people per month.\textsuperscript{72}

**The Military’s Vision of Intelligence: A Critique**

The institution of mental testing in the US offers an example of the difficulty in striking a balance between two different conceptions of *intelligence*. Military officials did not greet psychological testing as enthusiastically as psychologists may have liked. As psychologists continued to test soldiers and officers, military officials remained concerned that psychology, “something wholly intangible, even mysterious,”\textsuperscript{73} could not adequately predict military success. Like Goddard’s initial skepticism of the power of quantified intelligence, the fundamental problem with mental testing in the army was embodied in officers’ concerns with the *insufficiency* or *simplicity* of this new system.

Carson highlights the idea of psychological testing as a foreign import or interloper in the military context, as intelligence remained only one discourse for talking about human behavior. Criteria for a “good soldier” had not historically relied on abstract psychological theories. The human as *complex*—mentally, morally, and physically—offered the most significant evidence for rejecting a linear model of intelligence. Military officials believed that war necessitated skills that fell outside the realm of what counted as “intelligence.” (For example, the “gentle art of murder” could not be determined by intelligence.) Intelligence, then, was only one of many attributes to be evaluated.\textsuperscript{74}

\footnotesize
\begin{itemize}
    \item \textsuperscript{72} Ibid., 213.
    \item \textsuperscript{73} Yerkes, 351.
    \item \textsuperscript{74} Carson, 227.
\end{itemize}
Army officials may also have blamed psychologists for overstepping their professional boundaries. Intelligence evaluations seemed threatening to soldiers because they were not conducted by familiar superiors, nor were they based on “personal knowledge.” Instead, the use of an “‘objective’ scale whose output might be taken to be indisputable, was almost intolerable.”

Even if mental testing did provide the military with a systematic and fast method for assessment, the nature of intelligence as innate was essentially irrelevant for military officials. If intelligence was truly heritable, then it “was not a characteristic amenable to personal control. If found deficient, there was no ready means to correct the problem.” In contrast, a soldier could, perhaps, control his discipline, loyalty, and familiarity with military knowledge. Like Binet and his theory of a multidimensional intelligence, army officials found it difficult to simplify intelligence to a single number.

Yerkes was aware that the military might not easily embrace his tests. For starters, despite Goddard’s initial “missionary zeal,” mental testing had a bad reputation due to its original association with mental testing in institutions. In the early 1900s, “to be asked to undergo examination by a mental tester in this country meant that one was already suspected of serious intellective deficiency, or worse.” In response to this reputation, Yerkes pondered the “military-ness” of his tests, and decided to make them “more directly military in appearance.” Yerkes notes in his

75 Ibid., 228.  
76 Ibid.  
77 Dahlstrom, 73.  
78 Ibid., 74.  
79 Carson, 215.
war diary that commands such as “Attention!” “Go!” “Stop!” were used to emphasize obedience during testing to mimic military traditions. Test instructions encouraged obedience as well: “Now in the Army a man often has to listen to commands and then carry them out exactly. I am going to give you some command to see how well you can carry them out. Listen closely. Ask no questions. Do not watch any other man to see what he does.” In contrast, directions from the 1916 Stanford-Binet test asked: “I want to find out how many words you know. Listen, and when I say a word you tell me what it means.” Yerkes was sure that “distinctions between psychological and army intelligence resulted solely from military misunderstandings.”

The Problem of Diversity

It was not only pushback from skeptical military officials that complicated the introduction of intelligence tests into the arena. Wartime also presented issues not seen in civilian settings. Never had psychologists accounted for diversity in the testing populations. The diversity of candidates entering the armed forces at the start of the twentieth century problematized the military’s assessment program. Carson writes that “conventionally trained officers” were ill-prepared to accommodate “the enormous intellectual, cultural, and linguistic differences arising from a century of immigration and urbanization and from the creation of a large, free African American population.”

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80 Ibid.
81 Ibid., 227.
82 Ibid., 201.
Unlike the practice of individual testing in the civilian context, the Vineland committee discussed the necessity for a “rapidly administrable and scorable group test” for all recruits. The incorrect assumption that all military men “had comparable opportunities to acquire the component skills required to perform well on the tasks” presented a surprising obstacle. Psychologists were no longer testing a group of children from a particular school or neighborhood who had similar educational experiences, resources, and conditions. The Stanford-Binet scale, refined by Terman for the IQ test, was not immediately successful in the military context because “too large a proportion of American men were characterized as mental incompetents” due to sampling biases. In other words, the standard for “normal” intelligence was set too high due to the homogeneity of the students tested by Terman before its application in the military. Psychologists had entered a new and unknown universe.\(^{83}\)

Besides racial and cultural diversity in the testing populations, there were also differences in intention and motivation. Prior to the establishment of army testing, psychologists had mostly tested school-aged children, “who could be counted on to try to do their best when challenged by the examiner,” or adults at Ellis Island, “who had everything to gain by performing well.” (Dalhstrom writes that mental tests were “developed by the U.S. Immigration Service at Ellis Island in New York to examine subjects… who were seeking admission to and ultimately citizenship in this country.”\(^{84}\)) Therefore, academic psychologists were not prepared for military men who wanted to “get by with the least burdensome assignments possible.”\(^{85}\)

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\(^{83}\) Dahlstrom, 78, 84.

\(^{84}\) Ibid., 80.

\(^{85}\) Ibid., 83.
Regardless of whether Yerkes fully succeeded in the militarization of intelligence testing, the institution of mental testing for enlisted men marked a major accomplishment within the field of American psychology. The dramatic confrontation of psychology and the military during World War I forced a change in the perception of the role that intelligence played in determining human potential: by the end of the war, intelligence had become *mechanical* and *quantifiable*. It became the “unitary entity that differed among individuals in degree but not in kind,”⁸⁶ and provided the perfect “scientific” evidence for existing eugenic theories of superiority. Whereas Binet was a firm believer in multiple dimensions of intelligence, the IQ test pushed character and judgment to the wayside. Intelligence testing prevailed during World War I because it delivered what eugenic thinkers so desperately wanted: ‘proof’ of heritability.

**Postwar Psychology: The Quantification and Proliferation of Tests and Indices**

This early twentieth-century linear model helped to elevate intelligence above all other human faculties. The victory of narrow human potential was welcomed under wartime conditions, as the mechanization of assessment was needed due to extraordinary pressures. Nevertheless, this first attempt to apply mental testing for national security purposes set a foundation that the psychologists of the Second World War would overturn.

Unlike military intelligence activities, psychological testing certainly did not cease with demobilization after World War I. The interwar period was characterized

⁸⁶ Carson, 197.
by an explosion of new measurements and indices, as well as the emergence of clinical psychology “that was closely identified with the administration and interpretation of psychological tests.”\textsuperscript{87}

The psychological community in the 1920s was small and close, as many psychologists, both nationally and abroad, had collaborated during the war. Demobilization meant a shift in psychological activity, but not a lessening. Practically all the prominent psychologists who contributed to the field during the war continued research in some capacity. Yerkes, Terman, and Thorndike (to name a few) produced the National Intelligence test for the National Research Council. Yerkes worked at Yale’s Department of Psychology and revised his Yerkes-Bridges Point Scale (The Yerkes-Bridges Point Scale of Intelligence remained a strong alternative to the Stanford-Binet scale until 1937, when the Stanford-Binet scale was once again revised.)\textsuperscript{88}

Following World War I, psychological theories and the usage of mental testing extended to screening for emotional stability, as soldiers came home from war. The Committee on Emotional Fitness was established and headed by R.S. Woodward. The Committee created “Personal Data Sheets” with 116 questions that collected information about soldiers (known to psychologists as “Psychoneurotic Inventory scores”). In this way, the implementation of standard testing for emotional symptoms via a numerical score “marked an additional advance in the effort to quantify human

\textsuperscript{87} White, 86.
\textsuperscript{88} Ibid., 87-88.
These efforts extended the use of mental testing beyond intelligence to personality.

Most of the intelligence tests that developed in the twentieth century had transformed qualitative measures into quantitative measures. Psychologists, then, devised methods to communicate the meanings of these quantitative results. Yet as millions of men across the country had been subjected to hundreds of new tests, issues of subjectivity and deficiencies in verbal reporting plagued the field. Thus, psychology in the 1930s and 40s favored a new method for evaluating personality: projective testing.

In 1921, Swiss psychologist Hermann Rorschach published a new mental test that formulated “quantitative indices from the responses of the subjects to non-verbal, ambiguous, and amorphous inkblots.” While inkblots had been utilized somewhat by Binet and other psychologists, the creation of the Rorschach test marked the first time that this type of interpretation had been officially established to assess emotional disorders in patients and assess personality. David Levy introduced the concept of the projective test—a personality test relying on responses to a variety of abstract stimuli—in 1924. The Rorschach test represented one method of projective testing and it was eagerly adopted, despite some limitations.90

TAT and Projective Testing

The Thematic Apperception Test (TAT) evolved in the 1930s and 40s, as another

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89 Ibid., 85-86.
90 Ibid., 86, 98.
favorable “alternative to the discredited questionnaires.” After three sets of revisions, Henry A. Murray officially published his infamous “picture-story” tests in 1943 at the Harvard Psychological Clinic. Under Murray’s direction in 1934, the Harvard Psychological Clinic had become a hub for personality research and assessment, and ultimately served as “a model for personality assessment centers that appeared in universities, industrial organizations, and the military.” Murray was not the first psychologist to employ the use of pictures in mental testing. In fact, the 1908 version of the Binet-Simon test used pictures to determine the mental age of children: a child who could recognize some of the objects in a picture was considered to have a mental age of three; a child who could describe a full picture was considered to have the capabilities of a “normal” seven-year-old; and a child who could interpret a picture was said to have a mental age of fifteen.

Louis A. Schwartz, at the Detroit Clinic for Juvenile Research, was the first known psychologist to use “Social-Situation Pictures” with delinquent children in 1931. A “Social-Situation Picture” presented images of a boy in both social and solitary circumstances. The tested child would then be asked to describe what the boy in the picture was thinking about, or what he himself would do in that situation. The child’s response would supposedly reveal personality traits. It was not until 1935, however, that C.D. Morgan and Murray published the first report dedicated to the emerging field: “A method for investigation of fantasies: The Thematic Apperception Test”.

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91 Ibid., 99.
92 Ibid.
94 Ibid., 423.
Test.” While the exact inspiration for Morgan and Murray’s publication is now debated, the technique evolved into a tool with a variety of versions and formats.

Some images for testing—many of which were drawn by C.D. Morgan himself—were recommended for male subjects, while others were recommended for women. One image, according to a description written by C.D. Morgan and Murray, depicted “a young boy contemplating a violin which rests on the table in front of him.”95 Another image, per the psychologists’ description, showed “a girl standing alone. The expression on her face is obviously one of terror and anxiety.” A variety of picture series were progressively published between 1935 and 1943.96

The TAT was less like a standardized test, and more like a personal interview. What made Murray’s test unique was its prominent employment of story-telling as an assessment tool “for sampling a subject’s fantasies and momentary preoccupations.” The TAT used a subject’s imagination “to draw personological interferences.”97 This broadening of testing methods further provided a foundation for the Second World War, in which mental testing would continue to evolve.

By World War II, American psychologists would attempt to establish a finer set of sub-metrics for measuring and evaluating human performance in the military context. One’s character was certainly not one-dimensional; rather, psychologists more readily acknowledged that one person might be intellectually intelligent, but lack strong physical abilities. Personality mattered. This conception would bend toward a finer and finer parsing out of the attributes of human beings. World War II

95 Ibid., 432.
96 Ibid., 440.
97 White, 99.
intelligence tests, as discussed in Chapter Three, represented a partial re-adoption of Binet’s judgment-based intelligence scale.
chapter three
reframed: when intelligence met intelligence

“As living spies we must recruit men who are intelligent but appear to be stupid; who seem to be dull but are strong in heart; men who are agile, vigorous, hardy and brave; well-versed in lowly matters and able to endure hunger, cold, filth, and humiliation.”

– The Art of War, Sun Tzu (400-320 B.C.)

The establishment and rapid mobilization of the Office of Strategic Services (OSS), the predecessor of today’s CIA, represented the consolidation of previously-fragmented American military intelligence operations during World War II. The Japanese attack on Pearl Harbor triggered US mobilization, and the country had little time to prepare in an organized manner. As a result, the US military was pressed to establish a system that would immediately and efficiently evaluate candidates for a wide array of essential and dangerous intelligence missions. The distinctiveness of the OSS and the extraordinary duties of its personnel, however, required a reshaping—in fact, a broadening—of the metrics previously used to measure human capability. The establishment of the OSS and its assessment programs marked a fascinating junction at which “intelligence” met “intelligence”: the new consolidation of intelligence activities necessitated new conceptions of human intelligence and its role in determining merit.

The men and women of the OSS and its eleven branches were tasked with conducting warfare from the shadows; they engaged in “fifth column” activities or

1 Joseph E. Persico, Roosevelt's Secret War: Fdr and World War Ii Espionage (New York: Random House, 2001), 76.
“political warfare,” now called “irregular warfare.” This included clandestine support for the American war effort via the collection, creation, dissemination, manipulation, and analysis of global intelligence. The branches of the OSS were each responsible for a specific set of covert warfare practices, as well as technical support. The OSS contained the Communications (Commo) Branch; X-2 (counterintelligence), which attempted to crack the German Enigma code machines; Foreign Nationalities; Secret Intelligence (SI); Special Operations (SO), which engaged in activities such as sabotage and guerrilla warfare; Operational Groups (OG), which included paratroopers and foreign language specialists; the Maritime Unit (MU), Morale Operations (MO), the Research and Analysis Branch (R&A), and the Schools and Training Branch (S&T). Elizabeth “Betty” McIntosh, a former OSS agent in the MO division, describes a variety of duties in her 1998 book *Sisterhood of Spies: The Women of the OSS*: “As law-abiding citizens we were authorized to contact, manipulate, and organize resistance groups, engage in espionage, initiate rumors, forge documents, dynamite rail bridges, and infiltrate enemy lines. The only crime we could commit was to get caught, to ‘blow our cover.’”

As wartime pressures heightened, the OSS was faced with questions such as: who would get caught? Who would “blow our cover”? Who could be trusted? Answering these questions would remain a top priority. The OSS installed an extensive system for personnel assessment to determine who was best fit for particular sets of responsibilities. The establishment of the OSS represented the

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concatenation of a variety of intelligence-related activities that were previously unassociated. For this reason, a single, linear measure of intelligence utilized during World War I was no longer applicable. How could a single metric truly evaluate personnel for codebreaking, field operations, message interception, parachuting, sabotage, propaganda creation, and other tasks? There was no reason to think that fitness for all of these activities could be reduced to a single scale. Instead, the OSS assessment programs of the Second World War reemphasized multi-layered conceptions of human intelligence to select personnel most fit for distinct and varied intelligence duties. The OSS represented not only an unprecedented consolidation of intelligence activity during wartime; it also represented a toppling of the intelligence-as-linear model in the quest to measure human potential.

“Wild Bill,” A Pioneer

Under the direction of Major General William J. Donovan, the OSS employed 21,642 people between 1942 and 1945. Donovan, also called “Wild Bill,” earned his nickname during the First World War due to his heroic command of the 165th Infantry Regiment, or the “Fighting 69th.” His accomplishments during the war made him a decorated war hero; he was a recipient of the Congressional Medal of Honor, Distinguished Service Cross, Distinguished Service Medal, and two Purple Hearts. Prior to serving as the director of the OSS, Donovan also served as Assistant US Attorney General under Calvin Coolidge and as a lawyer on Wall Street. These

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4 Ibid., xi.
prestigious positions further bolstered his candidacy for the new intelligence position.\(^5\)

Today, Donovan’s legacy is characterized by his tenacity, imagination, and confidence as a “wealthy, forceful, energetic, self-made Irish American burning with ambition.”\(^6\) Joseph E. Persico, author of *Roosevelt’s Secret War: FDR and World War II Espionage*, writes of Donovan’s admirable foresight and optimism:

> It was one of Donovan’s great insights that he could obtain from America’s multiethnic population combat guerrilla teams that could successfully infiltrate enemy-occupied countries because its members spoke the language, knew the culture, and, in fact, were often the descendants of immigrants from that country.\(^7\)

Many argue that Donovan’s resolute leadership explains “why OSS undertook and carried out more different types of enterprises calling for more varied skills than any other single organization of its size in the history of our country.”\(^8\) While impressive, Donovan was non-traditional, perhaps to the chagrin of others: “There were many in the Pentagon—which had become War Department headquarters in 1943—and on Capitol Hill who had their long knives ready and waiting for any slip made by the commanding general of OSS or his secret agency.”\(^9\) Donovan’s leadership style and interest in information-gathering was reminiscent of that of Washington during the Revolutionary War, as discussed in Chapter One. Yet like Washington, Donovan had little institutional support and would soon confront difficult adversaries. President

\(^6\) Persico, 65.
\(^7\) Chambers, 9.
Franklin D. Roosevelt’s trust in Donovan allowed him to build the structure for a successful intelligence agency.

**A British Template for a New Assessment Program**

The early structure of the OSS was based upon those of its mature and well-established relatives, the British Secret Intelligence Service (SIS) and the Special Operations Executive (SOE).\(^{10}\) Per the order of President Roosevelt, Donovan traveled to London in 1940 “to study the effectiveness of German fifth-column subversion of Western Europe and to observe how the British were facing the threat of a German invasion of their homeland.”\(^{11}\) British Prime Minister Winston Churchill eagerly welcomed Donovan’s review of the SIS. In the face of a war of unknown magnitude, “The attitude of the British toward Donovan’s visit was rather like that of a couple much relieved at having made a good impression after inviting the boss over for dinner.”\(^{12}\) The possibility of American contributions to the war effort was a blessing for the British.

Donovan’s observations in London would soon prove invaluable to the future planning of the OSS, as it “not only saved the OSS immeasurable trial-and-error periods in its development but was also probably one of the forces responsible for its survival.”\(^{13}\) On another observational trip, Donovan also explored Spain, Malta, Egypt, Palestine, Iraq, Bulgaria, Yugoslavia, Libya, and Ireland in search of a wider variety of innovative intelligence operations.\(^{14}\)

\(^{10}\) Chambers, 2.  
^{11} McIntosh, 5.  
^{12} Persico, 68.  
^{13} McIntosh, 5.  
^{14} Persico, 79.
Despite their enthusiasm for Donovan’s visit and US involvement in the war, the British still recognized inaccuracies within the unsophisticated American intelligence community. British Commander Ian Fleming and Admiral John Godfrey, director of the British Naval Intelligence, visited the US to observe. Undercover in Washington, the British officers commented that American officials “prefer their intelligence to be highly coloured.” For example, Fleming and Godfrey reported that the US estimated the size of the German U-boat fleet to be approximately thirty percent larger than the British intelligence did; moreover, Americans also overestimated the strength of the German War Department and Air Force by 250 percent. The officers argued that, “This predilection for sensationalism hinders the reasoned evaluation of intelligence reports.”¹⁵

Noting the inaccuracies and lack of coordination between the existing intelligence organizations, Godfrey concluded, “‘There is no U.S. Secret Intelligence Service’”; rather, he perceived American intelligence agents as mere “amateurs.” The New York Times may have served as a better source of reliable information, “which was faster, better informed, more objective, and cost, at the time, pennies a copy.” Persico summarizes the scattered and disjointed approach to intelligence prior to the establishment of the OSS from the British perspective: “Jealous and competitive, the Americans operated on the premise that knowledge is power, but that knowledge shared is power diluted.”¹⁶ Nonetheless, in the face of quiet criticism, Donovan’s observations abroad revealed a necessity for US help to fight the Nazis.¹⁷

¹⁵ Ibid., 81.
¹⁶ Ibid., 81-82.
¹⁷ McIntosh, 5.
Benefits would soon appear for both countries: the British would be bolstered by American aid in the war, and the US would receive a tested template for enhancing their underdeveloped intelligence activity. While the British SIS and SOE eventually provided instructors, training materials, and weapons to support the development of the OSS, the American intelligence agency ultimately crafted its own path. The US rejected the British two-agency model, which segregated secret intelligence and special operations, and excluded the rigid “class formality between officers and enlisted men.” Despite utilizing a British framework, the OSS would soon evolve into a uniquely American agency.

The COI and Hostility

If the turbulent history of military intelligence in the United States, as outlined in Chapter One, was not evidence enough, the establishment and successful preservation of a streamlined intelligence organization would not come without difficulties. Prior to discussions about the OSS and its creation, Roosevelt attempted to unite the intelligence forces of the State Department, ONI, MID, and FBI. Yet a lack of coordination between intelligence agencies and redundant activity left President Roosevelt frustrated: Persico writes that the President found “this duplication” to be “wasteful, expensive, and inefficient.”

Tension between intelligence officers from different military branches exacerbated the situation. One example highlights competition between cryptanalysts in the Army and Navy. As there were too many intercepted messages from Japan to

18 Chambers, 4.
19 Persico, 17.
track and decode (this intel was codenamed “Magic”), the Army and Navy split the responsibility. An officer from each branch delivered a few of the most important messages “in locked pouches” to President Roosevelt and military secretaries. But who would be rewarded for successful intelligence gathering? Who would get the honor and prestige of delivering the most valuable messages to the White House? The solution to the problem was arbitrary, if anything: “In odd-numbered months, such as January, March, and May, his military aide would deliver Magic to the President, and in even-numbered months his naval aide would do so.”20 The President’s strong desire for coordination may have come as a surprise for those like Secretary of State Cordell Hull, who described Roosevelt’s White House as “bureaucratic anarchy.” Persico describes that “FDR disdained charts, created competing offices without warning those running old offices, and blithely broke the chain of command to deal with whomever he pleased…”21

Roosevelt’s attempts to orchestrate teamwork among the existing intelligence agencies were unsuccessful. Despite his previous requests for collaboration from other military leaders, the US was still unprepared to conduct intelligence as war raged abroad: the “country essentially lacked the back alleys, the counterfeiters, the potions, all the implements of deceit necessary to conduct what has aptly been called the game of foxes.”22 Intelligence activity operated on a scattered, ad-hoc basis. Not only were the Army, Navy, Air Force, and Signal Corps engaged in intelligence work, but agencies such as Foreign Economic Administration, Federal

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20 Ibid., 103.
21 Ibid., 17.
22 Persicoibid., 17-18.
Communications Commission, the Department of Justice and the FBI, the State Department, the Department of Commerce, Tariff Commission, the Interdepartmental Committee for the Acquisition of Foreign Periodicals, and the Survey of Foreign Experts contributed to intelligence efforts without cohesion or collaboration. Donovan’s challenge was to demonstrate that a new type of agency was necessary within a system where “almost any government agency might be an excellent source for certain kinds of intelligence.”

There were, of course, speculations regarding the imminence of US involvement in the war. Despite his disorganized tendencies, it was clear that Roosevelt trusted Donovan to lead a brand-new type of agency, dedicated solely to uniting all efforts for information collection and analysis. Consequently, Donovan and Roosevelt met on July 18, 1941—six months before the attack on Pearl Harbor—to discuss the establishment of what would be considered “America’s first national intelligence-gathering agency.” With the help of British officials Fleming and Godfrey, Donovan drafted the Memorandum of Establishment of Service of Strategic Information, which stated that: “Strategy, without information upon which it can rely, is helpless. Likewise, information is useless unless it is intelligently directed to the strategic purpose…” Donovan advocated for direct action to establish a coordinator of strategic information.

Consequently, in August of 1941, per the planning of Donovan and Roosevelt, the Coordinator of Information (COI), a civilian agency, was officially erected under

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23 “Streamlined ‘E’ Students Syllabus Rearranged for Basic a/B July 1944,” in Record Group 226, Box 2, Folder 30, Entry UD 161 OSS S&S T [National Archives at College Park, MD].
24 Donovan in Persico, 88.
the auspices of the White House. It was designed to serve as a centralized office
responsible for all American activities related to espionage, propaganda, and
counterintelligence.\textsuperscript{25} The COI was specifically ordered to analysis information
pertinent to issues of national security and deliver it to the President and other
officials.\textsuperscript{26} At its inception, the COI focused its research and propaganda efforts
predominantly on Nazi Germany.\textsuperscript{27} According to historian Thomas F. Troy, the COI
represented “novel attempt in American history to organize research, intelligence,
propaganda, subversion, and commando operations as a unified and essential feature
of modern warfare; a ‘Fourth Arm’ of the military services.”\textsuperscript{28} This unprecedented
consolidation, however, would come with obstacles.

Distrust of the COI from the Joint Chiefs of Staff (JCS), as well as hostility
from the other established agencies, mitigated COI’s initial success at the outset of
the war. Agents from the FBI, ONI, and MID were unwilling to share the prestigious
responsibility of reporting essential information to the White House, and were
especially reluctant to give up their control of domestic intelligence operations. They
were, however, willing to give up jurisdiction over foreign clandestine operations, as
they were uncomfortable with espionage during peacetime. With “unvouchered”
funds (personally allocated by the President and rarely audited), the COI was ready to
adopt the ‘less desirable’ undercover intelligence activities in September of 1941.\textsuperscript{29}

\textsuperscript{25} O’Donnell, xiii.
\textsuperscript{26} Ibid.
\textsuperscript{27} According to Patrick O’Donnell, author of Operatives, Spies, and Saboteurs: The Unknown Story of the Men
and Women of World War II’s OSS, the failure to predict or prevent the December 7th attack at Pearl
Harbor did not fall on the shoulders of the COI, as the Pacific Theater was not its original focus.
Rather, it had been the responsibility of the ONI and the War Department.
\textsuperscript{28} Michael Warner, "The Office of Strategic Services: America's First Intelligence Agency," (2000).
\textsuperscript{29} Ibid.
Still, opposition from the other agencies prevailed. The Joint Chiefs, in particular, despised Donovan as an “interloper,” and believed the organization would be better off under their control. One year later, on June 13, 1942, responsibility of the COI’s domestic intelligence operations was transferred to the JCS, save the responsibilities of the COI’s Foreign Information Service (which in charge of radio broadcasting). The reorganized department, dedicated now only to foreign intelligence, was renamed the Office of Strategic Services (OSS) under Donovan’s leadership. According to the CIA’s official website, the name change represented an elimination of “white” propaganda missions (the most common type of propaganda, disseminated from identified sources), as well as Donovan’s desire “for a title that reflected his sense of the ‘strategic’ importance of intelligence and clandestine operations in modern war.”\(^{30}\) The newly established OSS would handle foreign intelligence and some special operations not conducted by the other agencies.

**Slow Growth**

Continued animosity from other intelligence agents complicated the beginning of OSS activity for Donovan. In July of 1942, the State and War Departments, using a Presidential decree, prevented the OSS from receiving Axis intercepts and prohibited OSS activity in the Western Hemisphere. Nonetheless, Donovan resolutely pushed forward and began to establish his presence by posting agents abroad. He also

\(^{30}\) Ibid.
developed and encouraged strong research capabilities, which would eventually win his opponents’ respect.31

Conflict with other agencies was not Donovan’s only obstacle: the OSS had a human resources problem. Radio Berlin described the infant intelligence organization “as ‘fifty professors, twenty monkey, ten goats, twelve guinea pigs and a staff of Jewish scribblers.’”32 The functions of the OSS required the management of “thousands of Americans, many of whom did not feel like fighting,” by equally inexperienced instructors.33 Betty McIntosh writes of the progressive nature of the organization’s growth: “Most of us, men and women, were an undisciplined collection of volunteers selected almost at random, for many reasons, and for many objectives. Eventually, as the war progressed and our missions became more stabilized, OSS emerged as an essential arm of military planning in war zones.”34 At its height in 1944, the OSS would employ almost 13,000 people including civilians, military officers, enlisted men, and members of the Navy, Marine Corps, and Coast Guard. 7,500 of them served overseas.35 These agents needed to be identified, recruited, and trained.

One of the most prominent obstacles in the creation of the OSS was a shortage of time. Its creators and administrators “had the unprecedented task of creating a world-class intelligence organization overnight, from scratch”36 due to the mounting

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31 Warner writes that OSS “virtually invented the discipline of non-departmental strategic intelligence analysis—one of America’s few unique contributions to the craft of intelligence.” The Research & Analysis Branch, comprised of approximately 900 scholars, supported the agency with expertise in economics, political science, geography, psychology, anthropologist, diplomacy, and history. Ibid.
32 Hymoff and Corvo, 76.
33 United States Office of Strategic Services, 10.
34 McIntosh, xiii.
35 Warner.
36 O'Donnell, 1.
tensions of war. Additionally, most of the OSS activities required skills that were unnecessary for civilian occupations, and thus the military was left without trained personnel for the newly established jobs: “All FDR had, at this point, was a clique of gentlemen amateurs, equally amateurish military attachés abroad, an underfunded codebreaking services, and an empty intelligence center with rivals messily competing around the edges for supremacy.”

As during World War I, the need for quick mobilization encouraged a system of assessment that could keep up with the pace of war. The OSS and its new, independent approach to foreign intelligence, however, would not survive with the World War I linear evaluation model that prioritized narrow tests as the most legitimate way to evaluate intelligence. The agency’s emphasis on diverse activities necessitated evaluative processes based on a broader range of human characteristics.

**Recruitment at “Station S”**

Like its establishment, the beginning of recruitment and training for the OSS was rocky. The number of people that needed management grew quickly, and the demand for trained bodies was high: the “organization confronted the need to send operatives into the field at the same time that it was developing its recruiting and training systems.” According to the 1948 publication of *Assessment of Men: Selection of Personnel for the Office of Strategic Services*, the OSS was “given the briefest possible time in which to prepare. No one arranged a preliminary world tour for the staff so that the conditions at each base and the operations in progress could be

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37 Persico, 17-18.

38 Chambers, 12.
observed at first hand.” The swift entrance into war highlighted American unpreparedness.

“The Farm”

The first classes of trainees began their courses in April of 1942, and the development of these programs required space. A large plot of land with a “massive barn and satellite sheds and kennels, which provided ample space for setting up all sorts of stressful situations,” according to *Assessment of Men*, would be perfect for early OSS assessment and training. “The Farm,” located in Fairfax County, VA, was known as “Station S,” “S School,” or simply “S” to denote its secret activity.

Recruits were often summoned mysteriously to the camp to experience the “intricacies of intelligence operations.” One early recruit, Lyman B. Kirkpatrick, Jr., was advised not to disclose where he was going to his family. He was told to “pack enough clothes and toilet articles to last a week” and “leave a telephone number in Washington to be used only in an emergency.” Then, “A black Chevrolet with District of Columbia plates would drive up.” Kirkpatrick recalled that he was told only to use his first name (“which always impressed me as ridiculous, since mine is rather distinctive”) and that “There would be additional instructions upon arrival.” “Station S” would screen a total of 2,372 recruits: one-fourth failed, half “passed with reservations,” and the final quarter was “immediately accepted.” Of the fifty-two

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39 United States Office of Strategic Services, 11.
40 Chambers, 11.
41 United States Office of Strategic Services, 4.
emotional breakdowns to occur during the war, only two plagued agents who had passed the screening process.\(^{42}\)

The OSS relied heavily on their British counterparts for guidance. Kirkpatrick commented that instructors at “The Farm” honestly acknowledged their “inadequate backgrounds and experience in intelligence work.”\(^{43}\) One of the OSS’ chief instructors between 1942 and 1945, William “Dangerous Dan” Fairbairn, was a “former head of the British Shanghai riot squad” and taught for the SOE in Britain and Canada.\(^{44}\)

Deliberate coordination regarding OSS recruitment and training began by August of 1942 and in January of 1943, Donovan officially created the Schools & Training Branch (S&T), which was distinct from the other operational branches. Later, after an influx of candidates overwhelmed “Station S,” the OSS erected “Station W” in Washington, “Station WS” in the Pacific, and a station in the Yunnan Province of China to broaden the reach of the Schools and Training Branch.\(^{45}\)

Mid-1943 brought some disorganization for the agency, as the OSS “‘was busily and somewhat hazardously recruiting personnel without benefit of any professional or uniform screening process.’” Without a standardized process that fit the needs of the organization, the rapid enlistment of men and women necessary for wartime remained inefficient and sloppy. It is not surprising that some of the nation’s most prominent psychologists “had no idea what the qualifications were for a spy, saboteur, resistance group leader, section leader, liaison pilot, paratrooper, base

\(^{42}\) Hymoff and Corvo, 79, 82.
\(^{43}\) Ibid., 80.
\(^{44}\) Chambers, 6.
\(^{45}\) Ibid., 13.
station operator, communications operator, demolitions instructor, field representative, or even a pigeoneer." These occupations had never been formally defined within a single agency.

After a period of disorganization, planning commenced for a new and improved recruiting program. In November of 1943, the S&T Branch collaborated with the OSS Planning Staff to brainstorm new techniques for assessment. They drew inspiration for the psychological and psychiatric components from the British. Preparation for the new OSS program took place at “The Farm” and Dr. James A. Hamilton was put in charge of its design and implementation. The team included Dr. John W. Gardner (Mt. Holyoke College), Dr. Joseph A. Gengerelli (UCLA), Dr. Donald K. Adams (Duke), Lt. Donald W. Fiske (USNR), Dr. Henry A. Murray (Harvard). Their research efforts not only contributed to wartime successes, but also motivated advancement in the post-war psychological field.

What distinguished these improvements to the program? A 1943 memorandum highlighting the failures of early OSS recruitment offers a first glance at these changes. Most clearly, it emphasized the need to evaluate recruits beyond a simple “intelligence.” The memorandum stressed a need for recruits with common sense:

The organization has been recruiting too many men, civilian or military, who have the intelligence and sometimes the necessary mechanical training but who lack common sense, know nothing about working with men or how to look after the welfare and the morale of the men under them. We simply must

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46 Hymoff and Corvo, 80-82.
47 United States Office of Strategic Services, 4-5.
48 Following the war, many of the psychologists who contributed to OSS efforts became, or continued their work as, university professors to promote psychological research in areas such as personality theory. This allowed psychology to compete for recognition and resources alongside other scientific fields on campuses. See Lyle V. Jones, "Some Lasting Consequences of Us Psychology Programs in World Wars I and II," *Multivariate Behavioral Research* 42, no. 3 (2007).
have men who can shoulder responsibility and use initiative with common sense. Simply because a man has intelligence does not qualify him for this type of work. In some instances we also have had men who fall into the class of the high-strung or emotional type. We simply cannot use men of that type in the field when they have to live with Chinese, eat Chinese food, and be under pressure at times. In most cases these men have suffered nervous breakdowns and other nervous ailments.49

After careful planning, Donovan authorized the creation of the first assessment unit made up of six psychologists and psychiatrists that welcomed groups of about eighteen men, called classes. The program would “test the intelligence and stamina of candidates” with a one-day program.50

The plans for careful screening may also have come as an interdisciplinary success: it was “proof that psychiatrists and psychologists (men of science drawn from universities) could work harmoniously and fruitfully with businessmen and professional soldiers (men of action drawn from the world of affairs).” Assessment of Men boasted that, “No college president or faculty, we suppose, ever gave any psychological endeavor the backing and encouragement that was given our assessment units by the administrators of OSS…”51 The OSS assessment staffs created evaluation programs that screened a total of 5,391 recruits between December 1943 and August 1945.52

**Training, Another Form of Assessment**

Due to the need for fast mobilization, the agency could not afford to segregate recruitment and training, as the OSS could not waste time, resources, or instructors by

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49 Hymoff and Corvo, 80-81.
50 United States Office of Strategic Services, 5.
51 Ibid., 6.
52 Hymoff and Corvo, 82.
separating the two. Following initial recruitment planning, the various branches of the OSS continued to develop their training programs at a variety of locations. Two to three weeks of basic coursework occurred at Catoctin National Park, also called Training “Area B,” initially with approximately twelve instructors for twenty-four students. (Between 1943 and 1944, “Area B” would manage hundreds of students.) “Area A,” at Prince William Forest Park, housed more advanced courses.\(^{53}\)

Special Operations (SO), specifically, had a “vision of mass production of commando-like saboteurs, bold, brash gung-ho men with submachine guns and plastic explosives, whom other branches sometimes belittled as ‘bang-bang boys.’”\(^{54}\) Lieutenant Colonel Garland H. Williams, of federal law enforcement, was head of recruitment and training for the Special Operations (SO) branch. In preparation, Williams had visited a Canadian SOE training camp called Camp-X with Donovan. In early 1942, more than twelve SO instructors, some Secret Intelligence (SI) instructors, and the first group of American recruits trained there on “the rolling farmland on the edge of Lake Ontario.” A typical day of basic training included a five-mile run; two hours of gymnastics; lectures on personal disguise; observation, communications, and field craft; explosives training; small arms practice; parachute jumping; “crawling under barbed wire while machine guns fired live rounds overhead”; and night maneuvers. The final test required trainees either to parachute deep into the forest and then successfully make it back to camp, or “infiltrat[e] a local defense plant.”\(^{55}\)

\(^{53}\) Chambers, 5-6.
\(^{54}\) Ibid., 8.
\(^{55}\) Ibid., 2.
Williams’ training programs easily doubled as assessment, which helped to test a broad range of abilities. He designed a program that offered some preliminary training that would eventually help SO and SI agents prepare for more specific missions. In the meantime, his programs “provided elasticity” and tailored training “to a person’s previous experience, special qualifications, or assignment.” In this way, basic training, or “toughing up” courses that tested physical abilities, “would weed out the unqualified and help to classify accepted individuals for future instruction and assignment.”56

Other branches developed unique training spaces as well, each of which was dedicated to a set of specialized duties. This division of activities suggests that the OSS was inculcating a culture of specialization, unlike the generalist culture of the Army. “The Farm” housed advanced training for SI beginning in May 1942, with an inaugural class of eight trainees. Eventually, nine instructors directed a four-week course, which taught espionage, ciphers, weapons and martial arts, concealment, and other tasks for fifteen SI recruits per class. Basic SI intelligence, X-2, and MO training was conducted at “Area E,” or “two country estates” and a private school thirty miles north of Baltimore. The Commo Branch provided Radio training at “Area C,” a school in Prince William Forest Park. “Area D,” forty miles south of Washington on the eastern shore of the Potomac River, housed “instruction and practice in waterborne raids and infiltration.” The recruits of the Maritime Unit (MU), which was formed in 1943, trained in Florida, the Bahamas, and eventually California. The Congressional Country Club at “Area F” in Bethesda, Maryland

56 Ibid., 4-5.
provided the perfect place to show off training for the Operational Groups (OG) to the nation’s leaders.\textsuperscript{57}

The ultimate goal, of course, was to create assessment systems and training programs that would provide psychologists with “sufficiently reliable predictions” of a candidate’s abilities and personality. This task would certainly not be easy. \textit{Assessment of Men} wrote of the imperfect nature of the process: “The assessment of men…is the scientific art of arriving at sufficient conclusions from insufficient data.”\textsuperscript{58} What “sufficient conclusions,” then, could the OSS assessment team make? For whom, exactly, was the OSS searching?

\textbf{Staffing an “Unmilitary Military”}

The distinctiveness of the agency required an exceptional search for exceptional agents. James L. McConaughy, who oversaw OSS training from 1943 through 1945, described the uncharacteristic nature of the organizations’ activities: “Name me a weird subject of instruction and I will gamble that it was taught by O.S.S., somewhere, sometime!” The variety of activities was impressive. McConaughy taught “navigation, parachute jumping, how to kill wild animals and use them as food, lock picking, hiding microscopic sized confidential data, protecting oneself from dagger attacks and using one offensively, operating a wireless set, reading code and cipher, elementary foreign languages…”\textsuperscript{59} This meant that there was a myriad of questions to be asked regarding a single recruit:

- Will this man survive the rigorous training in Scotland?

\textsuperscript{57} Ibid., 8.
\textsuperscript{58} United States Office of Strategic Services, 8.
\textsuperscript{59} Chambers, 12.
• Will he be able to govern his anxiety up there in the plane as the moment for the drop approaches on that fateful night?
• Will he favorably impress the members of the resistance group into whose territory he will jump?
• Is his French fluent?
• Will he make a good instructor?
• Will he play safe, or will he manifest initiative and daring in setting up road blocks and harassing the Germans generally?
• Will he find isolation in a lonely farmhouse tolerable when he hears that the Gestapo are searching for him in the neighborhood?
• Can he hold his liquor?
• At one of those dinners the French will give in his honour will he rant and boast of the prowess of America?
• Will he get mixed up in politics?
• Will he succeed in persuading the rival French factions in his locality to cooperate or are his actions likely to increase antagonisms?
• Will he tolerate with equanimity the monsoon season in Calcutta?
• Will his mind provide a barrier to irritability when his body breaks out with prickly heat and athlete’s foot?  

Recruitment and training processes could not simply copy previously-used military assessment systems that highlighted a single intelligence factor as the most descriptive element. The OSS, considered “the most un-military military,” was an anomaly within the larger military system: “With little attention paid to regular army protocol and procedure, OSS training camps fostered a highly informal atmosphere. There were few distinctions between officers and enlisted men and little or no saluting or drill in the manual-of-arms or marching in ranks. Emphasis was on individual responsibility and initiative.”

Prior to the initialization of formal recruitment practices, Donovan sought out and accepted people that he knew, and liked—former co-workers, friends, etc. In lieu of requiring a formal application, Donovan eschewed bureaucracy by ordering some recruits to compete a short memo that explained “how ‘you could be of service to this
If Donovan agreed, the recruit was accepted. There were, however, some basic skills that were considered important: “People were recruited if they had the expertise that COI originally needed—academic specialties or other knowledge of distant lands and their people, climate, terrain, politics, and industries.” In other cases, trustworthiness may have been the key to landing a job. Agents “who could keep secret the most private affairs of OSS such as the movement of millions of dollars in currency from the U.S. to Europe to pay the resistance movement of many nations” would be valuable.

Age may have even played a role. In an interview in 1944, a SI agent discussed his opinion on the unpredictable nature of younger agents:

Older men make much more satisfactory agents in the European theatre than younger men. They have more patience and steadiness and are less likely to take unnecessary chances. Young men are too likely to be impatient for ‘action.’ Few single pieces of intelligence, he says, are worth risking ones’ cover: cover comes before almost anything else because all of one’s future effectiveness on the job depends upon it.

He also remarked that older men “are more respected and looked up to.” Stations in Europe, “a region of old people,” required agents with “wider possible circles of acquaintance, and many more avenues of information.”

Perhaps it was even difficult to define a “good” OSS agent by any simple metric. Edward Hymoff, author of *The OSS in World War II*, writes that anyone might have had the potential to serve in the agency. Hymoff describes that per Congressman John E. Rankin, there were “‘Communists in the OSS.’ And he was right.” There were “first-generation Americans and Mayflower Americans, 

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62 Hymoff and Corvo, 77-78.
63 Ibid., 77.
64 "Streamlined ‘E’ Students Syllabus Rearranged for Basic a/B July 1944."
Republican and Democrats, Socialists and Communists, mechanics and artists, second-story men and ex-cops, and many who had little or no aversion to danger and adventure. There were scholars, and there were suave smooth-talkers who had managed to sell their expertise at nothing to a friend of a friend who happened to be in the OSS.65 While perhaps an exaggeration, Hymoff’s point illustrates the diversity in candidates.

Still, despite the installation of the new programs in 1943, Hymoff writes that OSS headquarters in Washington received complaints regarding the “incompetence in the field.”66 Following a “few dramatic mental crack-ups,” OSS officials understood the requirement for even more deliberate screening for an essential organization. Ultimately, a few seemingly random characteristics stood out to assessors as important: defiance of the law, foreign language experience, and class.

Defiant Instructors

To begin, the OSS needed to find instructors prepared to train recruits. Who might be suitable to teach a wide range of skills, most of which were not applicable to civilian life? In 1942, Lieutenant Colonel Garland Williams tapped three main sources of instructors. The first source was former law-enforcement officials, including those from the Federal Bureau of Narcotics, Customs Service, Border Patrol, and police, who were useful due to their experience with firearms and martial arts. The second source was activated military reservists including army engineers, police, and infantry. Lastly, for instruction, Signal Corps personnel were recruited to teach

65 Hymoff, 77.
66 Ibid., 78.
wireless telegraphy and some cryptanalysis. The initial preference for law enforcement, reservists, and personnel of the Signal Corps is not surprising, as we might assume that their expertise in weaponry and technology prepared them for OSS duties. It was precisely the culture of their previous professions, however, that posed the greatest problem.

The issue with these potential instructor populations reflected the unique emotional requirements of an OSS agent: the clandestine, subversive, and often dangerous category of OSS activity required personnel who were willing to defy normative military duties. The intelligence agency did not need an individual with a high IQ to teach recruits; rather, unorthodox action required unorthodox personnel. As the OSS needed individuals willing to break the mold of law and order, standard individuals with training in traditional law-enforcement were often at a disadvantage. Their deep “respect for the law and a belief that lawbreaking and fugitives should and would be apprehended” prevented them from engaging in subversive activities.

Donovan recognized the exceptional nature of this “path-breaking organization,” and he eventually understood the need to recruit “bold, risk-taking, rule-breaking individuals.” The OSS employed “citizen-soldiers” to instruct, rather than “already established, fulltime, career professionals in the officer corps.”

Rebellious and “Intelligent” Agents

The search for free-spirited agents mimicked that of instructors. OSS assessors looked for “intelligent, independent-minded individuals,” but did not stop there. Defiance,

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67 Chambers, 11.
68 Ibid.
usually condemned by “rigid disciplinarians of the regular services,” continued to be a prized quality. Previous definitions of psychological intelligence, such as those used to categorize army officers in the military during World War I, relied on a narrow definition of intelligence based upon developmental theories of mental capability. These were not suitable to assess a wide range of individuals for a wide range of intelligence-related activities within one agency. The search for qualified agents required a “an assessment of a person’s entire personality,” including their courage, resourcefulness, morale, self-confidence, and self-reliance. Consequently, the OSS system attempted to create a system of evaluation that upended traditional, single-minded notions of “success.” At Station S, not only did the OSS assessment team judge candidates on their “mental and physical aptitude,” but they also evaluated “judgment, independence, emotional stability and their ability to act under pressure.”69 The agency undoubtedly required a new framework for understanding human capacity:

> Not surprisingly, the evaluation teams learned that, beyond the specific skills and training, what made an effective saboteur in France, an able spy in Germany, a successful commando in Burma, or a reliable clandestine radio operator in China was a secure, capable, intelligent and creative person who could deal effectively with uncertainty and considerable stress.

In line with recruitment standards, training programs for OSS agents were designed not to manipulate and develop one’s singular “intelligence,” but to capitalize on a more diverse character.70

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69 Ibid.
70 Ibid.
“Oh So Social”

While it was not explicitly stated by the OSS assessment staff, class played a large role in determining more “valuable” agents. To increase numbers, Donovan and other OSS officials relied on “administrators from the private sector who had made their mark in their respective professions.”71 In response, critics dubbed the organization, “Oh So Social,” due to the impressive number of wealthy recruits from Ivy League schools. Such recruits included financiers, an international lawyer, an ex-Rhode Island governor, executives with U.S. Steel and the Hawaiian Pineapple Company, a pollster, and movie star Sterling Hayden (“who later sailed small boats across the Adriatic between Italy and German-occupied Balkans”), Notre Dame halfback Joe Savoldi, the Prince of Imperial Russia, a labor lawyer, and a Minnesota legislator.72 Perhaps it was thought that this class of people would not spill the most important secrets of the OSS. The “elitist tone of OSS,” as well as the secret nature of OSS activities triggered derision, as well as the introduction of other nicknames including “Oh, So Secret,” “Oh, Shush Shush,” and “Oh, So Stupid.”73 The upper-socioeconomic sector, it appeared, had the finances and the education necessary for foreign intelligence.

Foreign Language Skills

Another central quality for agents preparing to work in dangerous zones abroad was a knowledge of foreign languages. More generally, most preliminary recruits were

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71 Hymoff and Corvo, 77.
72 McIntosh, 6-7.
73 Hymoff and Corvo, 76.
relatively “cosmopolitan,” as about half had already traveled to a foreign country. While many of the recruits were foreign-born or political refugees, the rest of the population was well-traveled: one-fifth had traveled in Europe, one-tenth in South America, one-twentieth in Africa or Asia, and one-fifth had spent at least five years abroad. About a quarter of the recruits were fluent in a foreign language, and half spoke two or more languages. In total, the candidates spoke over fifty languages.\textsuperscript{74}

\textit{Women}

Many women contributed to Donovan’s OSS as clerks, secretaries, and administrative assistants, but many also served in positions that may have been considered “dangerous.” For example, Lucius O. Rucker trained a total of 3,800 people at OSS parachute schools, thirty-eight of which were women. Rucker remarked, “In the more than twenty thousand jumps that he supervised, only fifty trainees refused when the time came to jump. Not one of those was a woman. The only complaint the women had was the extensive bruises they sustained when the parachute harnesses snapped roughly against their breasts in jumping.”\textsuperscript{75}

McIntosh, in her 1998 memoir, discusses her recruitment and assignment experiences: “I was assigned to MO [Morale Operations], partly because of my knowledge of the Japanese language, but mostly because of my newspaper experience. After spending three years in MO disguising the truth, slanting stories, and developing rumors, I had great difficulty writing a straight news story once the

\textsuperscript{74} Ibid., 82.
\textsuperscript{75} McIntosh, 13.
war was over.”

McIntosh describes her daily tasks: “Back in often crowded offices we waited for our own assignments, wrote reports, mastered cryptography, initiated propaganda supposedly originating from enemy sources, and learned for forge documents and double-talk our way out of classroom-rigged emergencies.”

Unorthodoxy may have been prized in female recruits, as well. In her memoir, McIntosh also introduces Jane Fonda, the first woman in the OSS to work on behalf of the US in the newly independent Indonesia. Fonda, “an unconstructed rebel” who married a Dutch civil servant from Indonesia, had moved to Java. Eventually, “disillusioned and rebelling against events abroad,” Fonda moved back to the US and joined the Communist Party in 1939. Once recruited to the OSS and stationed in Ceylon as an MO agent, she was ultimately assigned “to supervise repatriation of American military and civilian prisoners; take war-crimes testimony; and observe and report daily Indonesian political developments to OSS headquarters in Washington.”

Fonda, however, is not simply remembered for her conversations with over 500 American prisoners. McIntosh describes an amusing scene at an OSS base in Kandy, Sri Lanka. Fonda approached Navy Commander Willis Murphy at the OSS doctor’s office and requested condoms. Murphy, at first, appeared somewhat skeptical until Fonda added, “Yes, Murphy, about five hundred.” Murphy dropped his stethoscope. Later, Fonda sat in the corner of the room along with two Ceylonese women stuffing messages into the rubber condoms. The messages, intended to

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76 Ibid.
77 Ibid., xiii.
78 Ibid., 219-21.
convince Indonesians to defy the Japanese, would be distributed by submarine along the Indonesian shore.\textsuperscript{79} A broader intelligence scale may have made the intelligence arena accessible to many women like Fonda and McIntosh.

It is possible, however, that the more subjective tests of the OSS disadvantaged women. The OSS assessment program was somewhat flexible; it created more room for the personal judgment of the examiner (who was most likely male). Unlike the detailed evaluations derived from the OSS scale, results from an IQ test (as seen in Chapter Two) offered irrefutable evidence that a candidate was generally fit. This would prove helpful for women entering the male-dominated military. Doris Weatherford, author of \textit{American Women During World War II: An Encyclopedia}, writes that “female military users were enthusiastic users of aptitude tests” like the IQ. Weatherford also comments that aptitude tests may have been beneficial for other minority groups, including African American women, “as some minority recruits were able to demonstrate their potential with indisputable scores.”\textsuperscript{80}

An examination of women in the OSS suggests that the more holistic yet subjective evaluation of intelligence that emerged during World War II may have encouraged some women to serve, while deterring others.

\textbf{Recruitment Obstacles}

Undoubtedly, the psychologists that worked on developing the OSS assessment program faced obstacles. The men that authored \textit{Assessment of Men} outlined some of the distinguishing features of the OSS—and therefore the varying obstacles—that

\textsuperscript{79} Ibid., 220.
characterized the mobilization, recruitment, and training of agents in their first chapter titled “The Nature of the Task.”

Most simply, crafting job descriptions for OSS duties was nearly impossible. The wartime psychologists could clearly define “the functions of a secretary, an office clerk, an administrator, a medical technician, and a historian engaged in analyzing the economic, political, and social structure of this or that country.” It was much more difficult to define “the qualifications for the job of script writer, base station operator, demolitions instructor, field representative, section leader.” Additionally, even with written job descriptions, information from the battlefields abroad came via the branch chiefs and administrators in Washington, resulting in discrepancies between the description and reality. By the time the information reached assessors and instructors, the situation on the ground may well have shifted, requiring a completely new plan of action. It took a long time for the name of a role, such as “language expert,” “news analyst,” or “cartographer,” to carry specific and valuable meaning.\footnote{United States Office of Strategic Services, 11-12.}

It was not simply the fast-paced nature of intelligence warfare that stressed the OSS recruitment and training system. One group of candidates may have contained people who intended to perform six or seven different jobs. As a result, OSS psychologists also found it difficult to design a comprehensive one- or three-day assessment program. The number of activities carried out by the OSS required an incredible number of specialists: “It would have been a comparable situation, for example, if a dozen educators were asked to set up a school with a six-month term for the training of farmers, machine workers, salesman, stockholders, explorers,
chemists, diplomats, physicians, philosophers, congressmen, and theologians.”

Assessors could not rely on the past experiences of the candidates, as it was likely that they had never encountered the specific situations in which they would be evaluated. For example, jumping out of an airplane, “which is a triumph of the will over one of our least manageable instinctive fears,” was unnatural for most in civilian society. (Apparently, though, one OSS recruit said that he had previously jumped more than 2,300 times.)

Testing for some special and specific skills was also difficult. There were tests for observational skills, news analyses, and improvisation of propaganda, as well as standardized tests for aptitudes in Morse code. Yet it was too difficult to craft tests that would assess an individual’s ability in “policy making, calculating enemy vulnerabilities, editing an Austrian newspaper, practicing tropical medicine, nursing, parachuting, underwater swimming, training homing pigeons, running a linotype machine, drawing Japanese posters, and so forth.” Another difficulty stemmed from the diversity of the candidates themselves. Foreigners were valuable to the OSS due to their language skills and cultural knowledge, but their cultural differences also made it hard for assessors to predict their success.

**Intelligence Reframed**

OSS assessment officials hoped that the marriage of psychology (or “men of science drawn from universities”) to the business of the military (or “men of action drawn from the world of affairs”) might extend after the war. The authors of *Assessment of*

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82 Ibid., 11, 15, 17.
83 Ibid., 16-17.
84 Ibid., 6.
Men wished that the collaboration of military officials and psychologists would, “with mutual benefit, be even more effective in peacetime.”\(^{85}\) Moreover, the psychologists of the OSS training program believed that their comprehensive tests would recognize important skills for peacetime work, as well as human potential more generally. This would ultimately reframe post-war conceptions of intelligence in the US. In reflection, the authors of *Assessment of Men*, in recognizing the vast potentials of the men they assessed, described their wishes for the future:

> We hope that we shall meet and recognize many of these three-day friends of ours in years to come. In any event, we shall be ever on the lookout for news of them, especially of those for whom we predicted notable successes—this man to become Senator from Arizona, this one to edit a newspaper which would make Centreville more famous than Emporia, that tall young man to penetrate the mystery of mysteries of enzyme action, this fellow to complete his authoritative treatise on Chinese philosophy, that other one to play an important role in attaining the final acceptance of world government, and the stocky one with red hair to find the summit of contentment with his wife and children on a dairy farm in Maryland, to mention a few.\(^{86}\)

The goal of the OSS assessment program was not to identify and develop a general soldier, fit for a hierarchical structure. The OSS program emphasized that different individuals specializing in a variety of skills could contribute to a strong, multi-talented agency for information-gathering and analysis. This could then extend to civilian professions and society, more generally. The OSS’ assessment program, which evaluated agents using intelligence scales that measured specific talents, provided the foundation for our modern system of independent, centralized intelligence. While perhaps comparable to traditional screening programs at first glance, “the number and nature of the billets to be filled by ‘bodies,’ the adequacy of

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\(^{85}\) Ibid.

\(^{86}\) Ibid., 6-7.
the information about the different assignments, the types of men who came to be assessed, the conditions under which the work was done, [and] the kinds of reports that were required” shaped a unique organization. Never before was a multi-factorial scale of human intelligence needed, as numerous military intelligence activities had not yet been consolidated into one multi-activity organization. The OSS, in combining a set of specific information-gathering and analysis duties, required a more complex evaluation tool and a more complex definition for human intelligence.

**Eugenic Remnants**

The expansion of the definition of intelligence due to the consolidation of an assortment of intelligence-related activities under the pressure of large-scale war was remarkable. This is not to say, however, that the military during World War II did not find itself deeply connected to the ideologies set forth by the eugenics movement. Race, gender, sexuality, and class still played a large role in shaping personnel assessment and placement. Much of the rhetoric used in *Assessment of Men* resembled language used by twentieth-century eugenicists. For example, the book stated that “The chief over-all purpose of the OSS assessment staff” was “to eliminate the unfit.” The psychologists described that “the actions of a man who is stupid, apathetic, sullen, resentful, arrogant, or insulting in his dealings with members of his own unit or of allied units, or with customers or citizens of foreign countries” would cause “impairment of efficiency and morale” and “injury to the reputation of an

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87 Ibid., 9.
organization.” They continued: “To this must be added the irreparable damage that can be done by one who blabs. Diminution in the number of men of this stamp—sloths, irritants, bad actors, and free talkers—was one of the prime objects of the assessment program.”

The specific word choice used in Assessment of Men reflects a clear connection with eugenic language of the twentieth century. Many eugenicists of the era, such as David Starr Jordan (1851-1931), utilized similar vocabulary. One of Starr’s publications, titled The Blood of the Nation, A Study of the Decay of Races Through the Survival of the Unfit (1910), highlighted a figurative “blood,” signifying heredity. He described, “Older than climate or training or experience are the traits of heredity, and in the long run it is always ‘blood which tells.’” Jordan, who argued for selective breeding of humans, wrote that, “it is possible, with a little attention, to produce wonderful changes for the better.” Artificial breeding, the calculated selection of the most “desirable” individuals for procreation, would “select for posterity those individuals which best meet our needs or please our fancy, and to destroy those with unfavorable qualities.” For Jordan, “progress” meant “race improvement.” Jordan discussed the “degenerate sons of noble sires,” and claimed, “The survival of the unfittest is the primal cause of the downfall of nations.”

American psychologists’ discomfort with racial diversity was clear. The title of a section of Assessment of Men, “Heterogeneity of the Recruits: Strangeness (to Us) of Many of Them,” highlights this. As stated earlier, assessors were not familiar

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88 Ibid.
with “conventional assumptions, patterns of behavior, and modes of speech of Spaniards, Greeks, Albanians, Yugoslavs, Rumanians, Hungarians, Austrians, Germans, Poles, French, Hollanders, Chinese, and Koreans.” It was not simply language that intrigued (and perhaps worried) American psychologists, but also culture and behavior. Despite developments in the establishment of a broader intelligence for a consolidated and varied agency, remnants of eugenic thought continued to shape assessment language.

**End of the OSS**

The end of the war brought some structural changes to the OSS. Ultimately, however, Donovan’s vision of a permanent and institutionalized organization with a variety of specialized branches for information gathering and analysis was realized. In contrast to Finnegan’s ahistorical definition of consolidated military intelligence discussed in Chapter One, the establishment of the OSS represented progress toward our conception of a modern intelligence agency.

In April 1945, after President Roosevelt’s death, President Harry S. Truman was resigned to a dissolution of the OSS at the conclusion of the war. Donovan’s critics worried that he would carry his unconventional, and perhaps aggressive, leadership style into peacetime. Truman believed Donovan would one day use his clandestine intelligence knowledge against the US. Following victory in Europe in May 1945 and in anticipation of peace, Congress prepared for a demobilization campaign “against ‘war agencies.’” On September 20, 1945, President Truman signed

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90 United States Office of Strategic Services, 18.
Executive Order 9621, which called for the dismantling of the OSS on October 1. The State Department would take over the responsibilities of Research and Analysis (R&A), and the War Department would handle the rest. In a letter to Donovan, Truman wrote that this transfer of R&A signified “the beginning of the development of a coordinated system of foreign intelligence within the permanent framework of the Government.” With only ten days to dismantle the organization, Donovan scrambled to close up shop. Following its dissolution on October 1, 1945, Secretary of War John J. McCloy preserved only the activities of the SI and X-2 Branches in a newly established office called the Strategic Services Unit (SSU). Despite Donovan’s exit, the legacy of his call for “strategy” remained. The SSU was eventually transferred to a new agency, called the Central Intelligence Group (CIG).91

This story ends where it began. The National Security Act of 1947 established the CIA “to perform many of the missions that General Donovan had advocated for [in] his proposed peacetime intelligence service.” Many of the OSS’ most important characters continued their intelligence work in the CIA, including four of its future directors. The official website of the CIA notes that despite differences between the two organizations, “Donovan and his office deserve credit as forefathers of the Agency.”92

A farewell speech, given by Donovan to his agents on September 28, 1945, two years prior to the establishment of the CIA, sums up the remarkable interaction and accomplishments of the OSS:

We have come to the end of an unusual experiment. This experiment was to determine whether a group of Americans constituting a cross section of racial

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91 Warner.
92 Ibid.
origins, of abilities, temperaments and talents could meet and risk an encounter with the long-established and well-trained enemy organizations…. You can go with the assurance that you have made a beginning in showing the people of America that only by decisions of national policy based upon accurate information can we have the chance of a peace that will endure.  

Donovan’s intelligence agency, the first to unite a variety of information-gathering and analysis activities using a multi-factorial scale of a psychological concept, marked an impressive historical moment: when intelligence met intelligence

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93 Ibid.
afterword

A Review

This thesis explored the historical backgrounds of two very different conceptions of intelligence. Both conceptions informed the ways in which intelligence personnel were identified, recruited, and trained during the Second World War. The establishment of the OSS in 1942, the predecessor of the CIA, signaled a shift away from decentralized information-gathering and analysis in favor of our modern notions of consolidated and organized military intelligence operations. World War II marked modernity—the moment when these decentralized intelligence operations emerged as a distinct category of activities. The recruitment of agents for the wide variety of intelligence activities of the OSS necessitated a multi-factorial assessment system. To fit this need, the OSS employed assessment tests that embraced a wide and variable conception of human potential. This wider perception of intelligence demonstrated a departure from the narrow, linear intelligence models utilized during World War I.

An analysis of the 1948 publication of Assessment of Men: Selection of Personnel for the Office of Strategic, written by OSS psychologists, reveals the introduction of a new rhetoric of psychological intelligence into the agency’s world; therefore, the publication linguistically illustrates this historical encounter. The language used in the book, however, also highlights the legacy of the eugenics movement on the assessment programs. It was (and still is) difficult to erase these influences, as eugenic-based theories so deeply shaped our conceptions of human intelligence, race, class, gender, intelligence, and important characteristics.
The Selection of Spies

The heart of this project stems from a question: *what makes a good spy?* I would soon discover that this question is only one of a myriad of other questions, all of which comprise a complex set of puzzles. In what kinds of activities does a spy engage? Is spying the same as collecting information? Is information collection the same as intelligence collection? Which activities can be considered “military intelligence”? How can we organize these activities? How can we measure human potential for these activities, particularly during wartime? How can we reconcile cultural, linguistic, racial, and intellectual differences when evaluating a diverse group of people? How have these questions (and answers) changed over time? OSS officials attempted to solve these puzzles at the start of the Second World War.

At the same time, twentieth-century psychologists posed another question: *what is intelligence?* This question, too, leads to many more. Is intelligence hereditary? Does intelligence determine other human characteristics? Do other human characteristics determine intelligence? Is intelligence based on judgment? Is intelligence measurable? If so, how can we measure it? The quests to answer these sets of puzzling questions during World War II led to a reconceptualization of both military and psychological intelligence. Regarding the latter, a new American appreciation of a more inclusive human intelligence indicated a shift in what constituted the category of esteemed qualities.

Crossword Puzzles: An Analogy

The history of another type of puzzle acts as a useful analogy to this historical
moment of reconceptualization in the world of intelligence. The history of the crossword puzzle, particularly that of *The New York Times*, provides a similar and apt example of a shift in the category of esteemed qualities due to specific institutional contexts. (My love of crossword puzzles, as well as a deep interest in their surprising contributions to World War II, initially inspired me to explore these historical conceptions of intelligence.)

Newspaperman Arthur Wynne published the first “cross-word” puzzle in the *New York World* on December 21, 1913. In 1924, Simon & Schuster published the first crossword book, instantly popularizing the game.¹ That same year, however, the *Times* published an opinion column that called crosswords “a primitive sort of mental exercise” and “a sinful waste of time.” The column, titled “Topic of the Times” began, “Latest of problems presented for solution by psychologists interested in the mental peculiarities of mobs and crowds as distinguished from individuals is created by what is well called the craze over cross-word puzzles.” It concluded by announcing: “The amount and quality of intelligence utilized in the working out of cross-word puzzles almost precisely equal [that of] a problem that any eighth grade boy or girl who is ‘all there’ should have solved in his or her head in about thirty seconds.”² Clearly the *Times* was unimpressed with the word games, and scorned the skills required to complete them.

On December 18, 1941, two weeks after the bombing at Pearl Harbor, Lester Markel, the Sunday editor of the *Times*, wrote a letter to the publisher, Arthur Hays Sulzberger, urging the adoption of the crossword: “We ought to proceed with the

puzzle, especially in view of the fact it is possible there will now be bleak blackout hours – or if not that then certainly a need for relaxation of some kind or other.” Margaret Farrer, a “crossword pioneer,” contributed to the letter as well: “I don’t think I have to sell you on the increased demand for this type of pastime in an increasingly worried world. You can’t think of your troubles while solving a crossword…”

Unlike the *Times*, the British lauded the crossword as a valuable test of cleverness. During the Second World War, the crossword was considered a mental battle—“human ingenuity versus human ingenuity.” This, perhaps, explains why the heroes of the British intelligence community, who ultimately broke the German Enigma machine code, were crazy about crosswords. (It may not be a coincidence that “enigma” means “puzzle” in Greek.)

In January 1942, Arthur Watson, the editor of the British newspaper *The Daily Telegraph*, set up a crossword competition. Five people completed the puzzle in under twelve minutes, and the puzzle appeared in the paper the next day for the public. After completing “The Daily Telegraph Crossword Time Test,” one man, Stanley Sedgewick, received a “Confidential” letter. The letter requested that Sedgewick make an appointment with General Staff Colonel Nichols. Sedgewick, and others who completed the puzzle, eventually became codebreakers at Bletchley Park, Britain’s cryptography headquarters. It was assumed that completing a crossword and deciphering codes required the same skill—“making links between letters and words.” Both puzzles also required “getting inside the mind of the opponent” or enemy. Both, most importantly, were not about “being a robot and following a
procedure.” (Perhaps the ability to do a crossword puzzle was a good predictor of codebreaking skills. As discussed in Chapter Three, OSS agents, some of whom were codebreakers, were recruited for their ability to disobey procedure and think creatively.) Moreover, between May 2 and June 1, 1944, The Daily Telegraph published crosswords that included the answers “Utah,” “Omaha,” “Overlord,” “Mulberry,” and “Neptune”—all code words for the D-Day operations. Four days later, on June 6, the Allied forces landed on the beaches of Normandy. Leonard Dawe, a teacher and the creator of the crossword, said that he overheard the words from his students, one of whom had been listening to an American soldier near his home. Not only were crosswords helpful in recruiting codebreakers, but they also served as a valuable medium for codes. It was clear British intelligence community appreciated the crossword due to its help in the war effort.3

Eventually, the cajoling by individuals like Farrer convinced the Times of the popular appeal, and perhaps the redeeming qualities, of the crossword. On February 15, 1942, the Times finally published its first crossword puzzle, edited by Farrer. (The Times was the last major newspaper in the US to offer the puzzle.) The early skepticism of the Times, who derided the puzzle as a brainless activity, thus turned into an appreciation for the activity.4 Like the shifting conceptions of intelligence and intelligence activity during the twentieth century, the New York Times’ adoption of the crossword puzzle demonstrates that a previously-scorned activity (or set of skills) can gain prestige and societal esteem.

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3 Tom Chivers, "Could You Have Been a Codebreaker at Bletchley Park?," The Telegraph.
4 "75 Years of Crosswords."
The belief in the existence of one “superior” quality can quickly fade if the institutional context changes. Naturally, on any given day, another “superior” quality may take its place at the top, and consequently reshape our institutions acting within these changing contexts. It is a cycle: a change in circumstance (i.e. conflict or war) produces a change in our understandings of human nature (i.e. intelligence), which may finally reshape our institutions (i.e. intelligence agencies during wartime). Our perceptions of superiority and inferiority are fluid, flexible, and unpredictable. There is no telling when a small revolution might shake it all up.
bibliography

Archival Sources
—. "Streamlined ‘E’ Students Syllabus Rearranged for Basic a/B July 1944." In Record Group 226, Box 2, Folder 30, Entry UD 161 OSS S&T. National Archives at College Park, MD.

Primary and Secondary Sources


Neumann, Caryn E. "Department of State Bureau of Intelligence and Research, United States." In Encyclopedia of Espionage, Intelligence, and Security edited by K. Lee Lerner and Brenda Wilmoth Lerner: Gale Group, 2003.


