# Beacon and Warning: Sherman Kent, Scientific Hubris, and the CIA's Office of National Estimates

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Texas National Security Review: Volume 1, Issue 4 (August 2018) Print: ISSN 2576-1021 Online: ISSN 2576-1153



Would-be forecasters have increasingly extolled the predictive potential of Big Data and artificial intelligence. This essay reviews the career of Sherman Kent, the Yale historian who directed the CIA's Office of National Estimates from 1952 to 1967, with an eye toward evaluating this enthusiasm. Charged with anticipating threats to U.S. national security, Kent believed, as did much of the postwar academy, that contemporary developments in the social sciences enabled scholars to forecast human behavior with far greater accuracy than before. The predictive record of the Office of National Estimates was, however, decidedly mixed. Kent's methodological rigor enabled him to professionalize U.S. intelligence analysis, making him a model in today's "posttruth" climate, but his failures offer a cautionary tale for those who insist that technology will soon reveal the future.

> I believe it is fair to say that, as a group, [19th-century historians] thought their knowledge of the past gave them a prophetic vision of what was to come.<sup>1</sup> –Sherman Kent

t is no small irony that the man who did the most to develop the U.S. government's ability to predict the future was, by training, profession, and temperament, a historian. In August 1941, just months before the Japanese bombed Pearl Harbor, Sherman Kent was recruited to join America's first comprehensive intelligence agency — the organization that would soon become known as the Office of Strategic Services (OSS), the forerunner of the CIA. At the time, Kent was a 37-year-old professor at Yale, whose Gothic walls had sheltered him for nearly 20 years: as an undergraduate, as a doctoral student, and then as the teacher of "History 10," the freshman course on European civilization.<sup>2</sup> Kent had no military, diplomatic, or intelligence background — in fact, no government experience of any kind. This would seem to make him an odd candidate to serve William "Wild Bill" Donovan, a man of intimidating martial accomplishment, whom President Franklin D. Roosevelt had recently tapped to set up his spy shop.<sup>3</sup>

Of course, Donovan did not want Kent to be a covert operative. Rather, he wanted Kent to run the Mediterranean desk of the OSS's Research and Analysis Branch. Kent accepted the offer and spent the war churning out reports that, among other things, prepared Allied forces for their 1942 invasion of North Africa. After the war, Kent put off his return to Yale to spend a year at the newly formed National War College, where he wrote *Strategic Intelligence for American World Policy*, a book that outlined a framework for intelligence collection, analysis, and dissemination.<sup>4</sup> The book received wide attention

<sup>1</sup> Sherman Kent, "The Historian in Time of Trouble: The Age of Metternich" (paper presented at meeting of the American Historical Association, December 1940), folder 213, box 36, MS 854, Sherman Kent Papers, Manuscripts & Archives, Yale University Library (hereafter Sherman Kent Papers).

<sup>2</sup> Sherman Kent, Reminiscences of a Varied Life (San Rafael, CA: The Printing Factory, 1991), 185–86.

<sup>3</sup> Jeffrey T. Richelson, A Century of Spies: Intelligence in the Twentieth Century (New York: Oxford University Press, 1995), 131.

<sup>4</sup> Sherman Kent, Strategic Intelligence for American World Policy (Princeton, NJ: Princeton University Press, 1949).

inside and outside government. Famed columnists Joseph and Stewart Alsop declared it "the most important postwar book on strategic intelligence."<sup>5</sup> Decades later, it is still considered one of the field's foundational texts.<sup>6</sup>

It was, in part, on the strength of that book that, in 1950, Gen. Walter Bedell "Beetle" Smith, who had been Gen. Dwight Eisenhower's wartime chief of staff, asked Kent to join him at the Central Intelligence Agency, which President Harry S. Truman had just appointed him to lead. Kent's role was "unprecedented in history," as one CIA historian put it.7 He would be deputy director and soon director of the Office of National Estimates (ONE), charged not simply with analyzing the events of the Cold War but with anticipating them.8 The United States had just been surprised by North Korea's invasion of the South, and with the stakes of the Cold War continuing to rise, another surprise was something that could not be tolerated. In Kent's words,

The existence of controllable atomic energy and the dead certainty that others besides ourselves will soon possess the technical secrets, place a new and forceful emphasis upon intelligence as one of the most vital elements in our survival.<sup>9</sup>

Kent never returned to Yale after joining ONE. By the time he left the agency, after 17 years, he was a legend. As J. Kenneth McDonald, formerly the CIA's chief historian, would write, "Sherman Kent is a larger than life figure in the history of the Central Intelligence Agency."<sup>10</sup>

Such accolades were hard-earned. When Kent joined the Research and Analysis Branch, U.S. intelligence analysis was a haphazard affair. By the time he left the CIA, it was an orderly process staffed by career analysts who hewed to a strict methodology that prioritized objectivity in the face of ambiguity and neutrality in the face of ideology. Kent's insistence on disinterested analysis gave ONE a degree of independence from Washington politics, and his reverence for the scientific method legitimized its work on prediction. Such efforts easily could have been dismissed as crystal-ball speculation, but Kent benefited from the postwar scholarly zeitgeist, which held that human systems, like physical systems, were governed by laws that made their behavior predictable. Similar to his academic contemporaries, Kent ardently believed that even complex domains, like geopolitics, were inherently knowable. At ONE, he strove for nothing less than a science of prediction.

It is this passion that both complicates Kent's legacy and makes it particularly relevant today. On the one hand, at a moment in which expertise indeed the very nature of truth — is under attack," Kent can serve as a much-needed beacon of reason, a venerable model of Enlightenment values and their importance to national security. What's more, Kent anticipated - by decades - seminal findings in the field of judgment and decisionmaking, such as the prevalence of overconfidence and the dangers of confirmation bias, that have validated the role of social science in intelligence analysis. On the other hand, Kent's epistemological enthusiasm turned out to be hubris. In his belief that science could unmask the geopolitical future, Kent overreached. ONE's estimates were often wrong, the experts he revered underperformed as forecasters, and a science of prediction proved elusive.

Today's world is, once again, intoxicated by the prospect of prediction, hooked this time on a cocktail of Big-Data-enabled machine learning. Artificial intelligence undoubtedly holds great promise, but the excitement about its capabilities feels familiar and feverish. So, although Sherman Kent stands as a beacon, he may prove even more useful as a warning.

5 The Alsop brothers quote is from Bret Barnes, "CIA Official Sherman Kent, 82, Dies," *Washington Post*, March 14, 1986, https://www. washingtonpost.com/archive/local/1986/03/14/cia-official-sherman-kent-82-dies/e22ef6e0-a118-42be-b529-7e39f2babaaa/.

6 Jack Davis, "Sherman Kent and the Profession of Intelligence Analysis," *Sherman Kent Center for Intelligence Analysis Occasional Papers* 1, no. 5 (November 2002), https://www.cia.gov/library/kent-center-occasional-papers/vol1no5.htm.

- 9 Sherman Kent, "Prospects for the National Intelligence Service," Yale Review 36, no. 1 (Autumn 1946): 116–17.
- 10 J. Kenneth McDonald, "Foreword," in Steury, Sherman Kent and the Board of National Estimates, 7.
- 11 See, for example, Thomas M. Nichols, The Death of Expertise: The Campaign Against Established Knowledge and Why It Matters (New York: Oxford University Press, 2017); and Michiko Kakutani, The Death of Truth (New York: Tim Duggan Books, 2018).



<sup>7</sup> Donald P. Steury, "Introduction," in *Sherman Kent and the Board of National Estimates*, ed. Donald P. Steury (Central Intelligence Agency, 1994), 13.

<sup>8</sup> To be precise, William Langer served as director for ONE's first year, with Kent as his deputy, but Smith had made it clear upfront that Kent would take Langer's position when the Harvard historian had to return to Cambridge in 1951. Kent, *Reminiscences*, 244. On ONE's remit, see Kent, *Reminiscences*, 257–58.

### The Recruitment

Kent was born in California in 1903, the son of a businessman-politician who served three terms in Congress. In 1921, because nearly every other man in his family had done so,<sup>12</sup> he began his studies at Yale, where he promptly distinguished himself by flunking freshman history. The failure hit him hard. And because the class was mandatory, he feared he would be kicked out. "In fact, I was so pessimistic in my outlook," he later wrote in a self-published memoir, "that whereas every other freshman bought a big blue Yale banner with the words 'YALE 1926' on it, I was so sure that I was not long for the Class of 1926 that I bought a banner that read simply 'YALE'."<sup>13</sup>

Kent retook and passed the class, but he avoided further history courses until he registered for an introduction to medieval France with John Allison, whom he recalled as "the most interesting and perhaps the most compelling lecturer on the whole faculty."14 After graduation, Kent struggled to choose a profession, vacillating between practicing law and teaching high school. It was Allison who suggested that he pursue his Ph.D. at Yale, a goal that might be attainable — despite the fact that his academic record "was no great shakes," as Kent put it - if he applied while professors still remembered him.15 He followed Allison's advice and was accepted. Seven years later, he earned a doctorate in history, specializing in 19th-century French politics, and joined Yale's history faculty.

In 1941, he was teaching the very class he had failed when he got a call from Conyers Read, a historian of Renaissance-era England at the University of Pennsylvania, whom he knew "both personally and professionally."<sup>16</sup> The purpose of the call was vague. As far as Kent could tell, Read was "mobilizing historians" to compile information for a government propaganda effort. Kent was intrigued enough to get on a train to Washington to meet with Read and William Langer, a famed Harvard professor of diplomatic history. There, the two told Kent that Roosevelt was forming an agency under Donovan — known initially as the Office of the Coordinator of Information and, soon after, as the Office of Strategic Services — that would combine intelligence analysis, operations, counterintelligence, and propaganda. They wanted him to join the analytic branch.

As Kent explained in a letter to his mother,

It seems that there is a very enormously great damn deal of information coming in to various governmental agencies — military and naval intelligence, F.B.I., State Dept. etc. — all of it gathered and put together by specialists in the multitude of special fields. As yet there is no one with the training or desire to coordinate the dope for purposes of high policy.<sup>17</sup>

Indeed, the prewar coordination of "dope" was poor. Today, the intelligence community — composed of 17 separate organizations, led by the director of national intelligence — is an integral part of the U.S. national security establishment. But in 1941, there was no such arrangement. The military collected information on foreign forces, as it had during World War I, and the State Department gathered political and economic intelligence, but Roosevelt was happy with neither the soldiers nor the diplomats. Kent explained,

It seemed that Mr. Roosevelt was far from pleased with the kind of intelligence support he was getting from the armed forces and was also inclined to disbelieve or give low credence to the political and economic information that was coming into the Department of State from its many diplomatic missions overseas.<sup>18</sup>

Kent was immediately interested in the job. Although his continuing work on French history was proceeding well, he had been worrying for

- 14 Kent, Reminiscences, 101.
- 15 Kent, Reminiscences, 108-9.

<sup>12</sup> Antonia Woodford, "Sherman Kent at Yale: The Making of an Intelligence Analyst," Yale Historical Review 3, no. 1 (Spring 2014): 64, https:// historicalreview.yale.edu/sites/default/files/spring\_2014\_yhr\_web\_0.pdf. I am indebted to this article for pointing me to certain correspondence between Sherman Kent and his mother.

<sup>13</sup> Kent, Reminiscences, 77.

<sup>16</sup> The information in this paragraph comes from Sherman Kent letter to his mother, Elizabeth Thatcher Kent, Aug. 20, 1941, folder 996, box 50, MS 309, William Kent Family Papers, Manuscripts & Archives, Yale University Library (hereafter William Kent Family Papers).

<sup>17</sup> Sherman Kent letter to his mother, Aug. 27, 1941, folder 996, box 50, MS 309, William Kent Family Papers.

<sup>18</sup> Kent, Reminiscences, 185-86.

months about "how remote and useless this sort of research appears in the light of our crisis values,"19 which is to say that Adolf Hitler's conquest of Europe made Bourbon France seem a bit arcane. The job with the Office of the Coordinator of Information seemed like a chance to use his skills to participate in the war (or, at this point, prewar) effort. What's more, Read and Langer assured him he would be working alongside some of the most impressive scholars in the country: "Apparently the lure of the work has been enough to get the real top men in history, geography, and economics from all over the country."20 He accepted the offer and within two weeks was in Washington, serving as chief of the Mediterranean division in the office's Research and Analysis Branch, or "R&A."

To understand why a man of action like Bill Donovan was mobilizing historians to supply the president with intelligence may require denizens of the digital age, constantly bombarded as they are by multiple streams of information, to think about what "information" meant in the mid-20th century. In 1941, information was stored on paper, catalogued on cards, and retrieved by people, not computers. What's more, in contrast with today's

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service- and information-based economy, the economy of the early 1940s was dominated by manufacturing and agriculture. Only 5 percent of the adult population had a college degree.<sup>21</sup> That meant that only a tiny sliver of the population could be considered "knowledge workers," in today's parlance — people with the skills to find, collate, and process vast amounts of information, especially information on far-flung locales and esoteric subjects. Chief among them were academics.

After World War I — during which U.S. intelligence efforts had grown substantially — the Army and Navy had been charged with maintaining a "constant flow of information from almost every part of the world," according to Kent.<sup>22</sup> Had they done so, by the time the Japanese bombed Pearl Harbor, the United States would have had hundreds of encyclopedic volumes on various countries and topics. Instead, the information gathered did not seem to be enough to fill a single volume. As Kent describes,

From our visits and meetings with the various intelligence officers of the Armed Forces, we had some pretty solid evidence that any active intelligence work must have ended with the First World War. ... There could be no speedier way to bring to light the shocking state of U.S. intelligence than the imminent outbreak of war.<sup>23</sup>

The problem the United States faced as

it approached а global showdown with the Axis powers was how to collect, synthesize, and present massive amounts of information about foreign countries and potential theaters of battle. That is why, when the Office of the Coordinator of Information was first conceived, Archibald MacLeish, the librarian of Congress, gathered representatives from several tweedy organizations — the American Council of Learned Societies, the

Social Science Research Council, and the National Archives — to determine who among them could best advise the new research-and-analysis effort.<sup>24</sup> It was often academics — historians, political scientists, and geographers — who knew the most about the foreign lands the United States would be fighting in, and they knew how to get information they did not have and distill the data into a readable product.

21 "1940-2010: How Has America Changed?" U.S. Census Bureau, March 14, 2012. https://www.census.gov/library/visualizations/2012/ comm/1940-census-change.html.

22 Kent, Reminiscences, 198.

23 Kent, Reminiscences, 187–88.

24 Richelson, Century of Spies, 204.



<sup>19</sup> Sherman Kent letter to his mother, March 12, 1941, folder 995, box 50, MS 309, William Kent Family Papers.

<sup>20</sup> Sherman Kent letter to his mother, Sept. 12, 1941, folder 997, box 50, MS 309, William Kent Family Papers.

However well-prepared his profession was for the task, Kent was shaken by his introduction to R&A:

I've been new to many jobs before, but I've never been new to a *new job*. I've never been set down (or far better) stood up to do something, anything, not knowing how to do it [and] been unable to find anyone who has more dope than myself. It is a shattering experience.<sup>25</sup>

A set of notes from his first weeks on the job contains questions ranging from the mundane ("Do I need one of those badges. Where do I get it.") to the fundamental ("Will research carried on be primarily of [a] strategic nature").<sup>26</sup> As he later recalled,

There were few in Washington who could give any guidance as to how to go about the business at hand. What intelligence techniques there were, ready and available, were in their infancy. Intelligence was to us at that period really nothing in itself; it was, at best, the sum of what we, from our outside experience, could contribute to a job to be done.<sup>27</sup>

One expectation was met, however: Read and Langer's promise that he would be working with the top scholars in the country was borne out. Many of Kent's colleagues were at the peak of their profession. James Phinney Baxter was the president of Williams College. John Fairbank was the country's leading Sinologist. Hajo Holborn was the Sterling professor of history at Yale. There were dozens and dozens more. As historian Robin Winks put it, "The list of historians who worked for the OSS reads like a *Who's Who* of the profession."<sup>28</sup>

By contrast, Kent was not yet a full professor. He was probably tapped for the job because, like nearly

everyone who was hired, he knew someone - in his case, Conyers Read — who was doing the hiring. But there were one or two other factors that might have pushed him higher on Read's list. The first was a committee that Kent founded at Yale, in 1939, dedicated to collecting prewar German propaganda and preserving it for the historical record.29 The second was a talk he gave to the American Historical Association in December 1940 under the heading "The Historian in Time of Trouble," in which he described historians who, at times of political unrest, had stepped out of the ivory tower to guide the political process: "It was the scholarstatesman who knew the points of reference in the past and could use them as guides to the right regulation of future public affairs."30 Both activities broadcast Kent's desire to do something of grand purpose during a time of global crisis. And, because midcentury academia was an old boys' club — and because, as a Yale faculty member, Kent sat at one of its most exclusive tables - it may not have taken much prompting for Read to call him that August day in 1941.31

### **Research and Analysis**

Whatever the proximate cause of Kent's hiring, he rapidly distinguished himself at R&A.

Kent arrived in Washington with a well-defined way of thinking — or, more accurately, a welldefined way of thinking about how one should think. Kent was not an ideologue — far from it. He was a methodologist. In fact, when Read had called him to service, he had just been wrapping up the proofs of a book on the proper way to *do* history. *Writing History* was intended primarily as a primer for undergraduates who had to produce their first history papers. (Reading the book, one gets the sense that Kent was tired of seeing the same mistakes in each iteration of his "History 10" class.) But the volume also serves as a succinct guide to

25 Sherman Kent letter to his mother, Sept. 6, 1941, folder 997, box 50, MS 309, William Kent Family Papers. It is not clear what Kent was referring to when he wrote that he had been new to many jobs before, given that he had worked at Yale his entire career.

26 Sherman Kent, untitled notes that Kent dates to "about 10 Sept 1941," folder 58, box 43, MS 854, Sherman Kent Papers.

27 Sherman Kent, "The Need for an Intelligence Literature," *Studies in Intelligence* 1, no. 1 (September 1955), https://www.cia.gov/library/center-for-the-study-of-intelligence/kent-csi/vol1no1/html/v01i1a01p\_0001.htm.

28 Robin W. Winks, Cloak & Gown: Scholars in the Secret War, 1939–1961 2nd ed. (New Haven, CT: Yale University Press, 1987), 495.

29 Woodford, "Sherman Kent at Yale," 80.

30 Kent, "The Historian in Time of Trouble."

<sup>31</sup> The clubbiness of Research and Analysis is vividly demonstrated by Kent's description of his own hiring practices: "My first and most pressing task was to begin recruiting staff for my Mediterranean section. Rudolph Winnacker immediately came to mind ... he was a fellow French historian whose interests and sympathies often paralleled my own. ... It was Bill Langer who directed us to Rick (Richard P.) Stebbins who had done his graduate work at Harvard. ... Soon after Dick, we hired Henry Cord Meyer from Yale where he was doing his graduate work on 'Mittel Europa' under Hajo Holborn. I had been close to Holborn while at Yale and was happy to invite Henry with Hajo's strong recommendation. ... Also largely on Holborn's advice we recruited Bob (Robert G.) Miner. Bob was also doing his graduate work at Yale. ... Another one of our early recruits and again from Yale was Henry L. Roberts." Kent, *Reminiscences*, 100–02.

Kent's faith in reason, the scientific method, and the search for truth.

The "most serious" reason to study history, he wrote, is that it brings the student into "intimate contact with the chief philosophical assumptions behind his existence. For if his work [is to] have any merit at all, it will have come from the systematic nature of his research and thought."<sup>32</sup> He continued: "Chiefly does 'systematic' study imply skepticism of things taken for granted."<sup>33</sup> To Kent, such skepticism — the willingness to criticize assumptions, particularly one's own — was the essence of history, of estimable thought in general. What's more, he maintained, rational, systematic thought is what enables social progress.

Although Kent stressed the importance of narrative in history, he saw the discipline as "akin to the method of science which Francis Bacon put forth in the early seventeenth century." Specifically, Kent wrote,

It consists of gathering facts. ... It consists of forming hypotheses on the basis of these facts, of testing these hypotheses for traces of one's own ignorance or bias, of cleansing them if possible. The goal of research is to build better hypotheses than already exist and to establish them as relatively more true: it is to reveal a sharper picture of what happened and to make a closer approach to actuality than anyone has yet contrived.<sup>34</sup>

*Writing History* was a manifesto for realizing truth through the scientific method, intellectual flexibility, and unrelenting skepticism of the evidence.

Kent brought this attitude directly to Research and Analysis, whose purpose, he noted, "was trying by the method of science to approach truth."<sup>35</sup> As his close colleague Harold P. Ford would later note,

Closely paralleling the theory and practice of professional intelligence were certain of the principles of the historian's calling Sherman Kent enunciated in his first [*sic*] book, *Writing History*, which he had written while at Yale. In many of the passages one need only substitute the words 'intelligence officer' for 'historian.'<sup>36</sup>

In that scholarly attitude, Kent both reflected and contributed to the approach of R&A writ large. The Research and Analysis Branch became known as "the Campus" not simply because it comprised some 900 scholars but because their methods, far from being clandestine, relied so heavily on libraries and other open-source materials, such as government testimony, newspaper articles, and radio reports. Donovan, who lacked no flair for the dramatic, embraced the "Bad Eyes Brigade" because he could see just how much information they could pull from the most prosaic of sources.<sup>37</sup> Kent spent his first day on the job at the Library of Congress retrieving articles from the American Historical Review and the Journal of Modern History "in an effort to discover what Americans have written on the fine red Mediterranean."38 It would quickly become clear that the R&A scholars could produce most of what the military (and other elements of the war effort) needed simply by hitting the books. As Winks put it, "R&A controlled the most powerful weapon in the OSS arsenal: the three-by-five index card."39

R&A was like a university in another crucial respect: its tolerance, and even encouragement, of free thinking — an approach that was rare in the bureaucracy and the military but that could produce brilliant ideas and reduce the risk of artificial consensus. Kent later explained the need to tolerate idiosyncrasy:

In a sense, intelligence organizations must be not a little like a large university faculty. They must have the people to whom research and rigorous thought are the breath of life, and they must accordingly have tolerance for the queer bird and the eccentric with a unique talent. They must guarantee a sort of academic freedom of inquiry and must fight off those who derogate such freedom by pointing to its occasional crackpot finding.<sup>40</sup>

34 Kent, Writing History, 29-30.

<sup>32</sup> Sherman Kent, Writing History (New York: F.S. Crofts & Co., 1941), 4.

<sup>33</sup> Kent, Writing History, 5.

<sup>35</sup> Sherman Kent, "Research and Analysis Branch, 1943–1945," folder 58, box 43, MS 854, Sherman Kent Papers.

<sup>36</sup> Ford, "A Tribute to Sherman Kent," 26. Kent's first book was actually Electoral Procedure Under Louis Philippe (New Haven, CT: Yale University

Press, 1937).

<sup>37</sup> Winks, Cloak & Gown, 67.

<sup>38</sup> Sherman Kent letter to his mother, Sept. 6, 1941.

<sup>39</sup> Winks, Cloak & Gown, 62-63.

<sup>40</sup> Kent, Strategic Intelligence, 74.

But R&A was unlike a university faculty in a few important ways — ways that not only helped its work but that also foreshadowed developments in the academy itself by many years. For one thing, R&A did not merely encourage but demanded collaboration among its scholars. Whereas many

academics were used to beavering away in solitude on a project for years on end, the breadth of knowledge needed for any one project and the speed with which reports had to be produced required cooperation. That cooperation rankled egos, and some argued that collaboration actually diluted

the scientific method since no single person would collect the data, draw hypotheses, test them, and, if necessary, start over.<sup>41</sup> Yet analysts had no choice but to work together given wartime deadlines. As Kent noted, R&A might have had the aura of a university, but it had the pace of a newsroom.<sup>42</sup>

R&A also forced its 900 scholars to work across disciplines. The bureau included historians, economists, political scientists, geographers, psychologists, and anthropologists.43 As Winks notes, "Since intelligence required its own methodology, R&A would derive this methodology from several disciplines."44 But such interdisciplinary cooperation was not normal for the time. In particular, the economists, with their mathematical models, chafed at working with colleagues from less quantitative fields and showed a tendency toward bureaucratic expansionism: "We have taken over Europe. We are moving in on the Far East and we will shortly get going on the USSR," one junior economist wrote.45 As Jack Davis, a CIA expert on Sherman Kent, quipped, "One of Kent's legendary achievements was to talk reluctant economists into serving under the direction of an historian."46

The first real test of such coordination - and

S Donovan told R&A that the Allies were planning to invade North Africa and needed information on the region immediately. North Africa fell within Kent's brief, and, in a marathon 50-hour session, he and the R&A staff produced a report

of Kent himself - came in August 1942, when

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> on Morocco, followed by reports on Algeria and Tunisia. The military was impressed by both the rapid response and the sheer breadth of the reports, and, Winks writes, "Donovan told the unit that they had produced 'the first victory' for R&A's methodology."<sup>47</sup> According to Davis, "The North Africa reports helped make R&A's reputation with the military as a valuable win-the-war asset. The event also made Kent's reputation as a rising star in the new world of intelligence research and analysis."<sup>48</sup> Kent continued to make himself useful within the organization, advancing where there were openings, and, by the end of the war, his reputation had spread.

> Washington had taken notice of R&A's accomplishments. The volume of information that the analysts processed — during a single week in 1943, the branch was inundated with 45,000 pages of foreign material — was staggering. Their output was even more so — some 3,000 reports on a preposterously wide range of topics.<sup>49</sup> Intelligence historian Jeffrey Richelson describes the scope of their efforts:

The subjects of R&A studies covered a vast number of economic, political, sociological,

48 Davis, "Sherman Kent and the Profession of Intelligence Analysis."

<sup>41</sup> Winks, Cloak & Gown, 69.

<sup>42</sup> Kent, Strategic Intelligence, 75.

<sup>43</sup> Central Intelligence Agency, "The Office of Strategic Services: Research and Analysis Branch," https://www.cia.gov/news-information/featuredstory-archive/2010-featured-story-archive/oss-research-and-analysis.html.

<sup>44</sup> Winks, Cloak & Gown, 72.

<sup>45</sup> As quoted in Barry M. Katz, Foreign Intelligence: Research and Analysis in the Office of Strategic Services 1942–1945 (Cambridge, MA: Harvard University Press, 1989), 102.

<sup>46</sup> Davis, "Sherman Kent and the Profession of Intelligence Analysis."

<sup>47</sup> Winks, Cloak & Gown, 85.

<sup>49</sup> Richelson, Century of Spies, 204-5.

and military subjects: the status of rail traffic on the Russian front in Japan, the attitudes of the Roman Catholic church in Hungary, Charles de Gaulle's political ideas, the looting and damaging of art works, the Indian Communist party, trade routes in the Congo basin, Japan's electric power industry, and the relation of tin acquisitions to airplane production in Japan.<sup>50</sup>

And yet R&A's prodigious output and its contribution to the Allied war effort did not ensure its organizational survival.51 Almost immediately after Japan's surrender in August 1945, Truman fired Donovan, whom he found arrogant, and shelved his plan to create a centralized intelligence service, telling Harold Smith, who directed the Bureau of the Budget, that he had "in mind a different kind of intelligence service from what this country has had in the past."52 In the meantime, he disbanded the OSS, placing its clandestine operations within the War Department and the Research and Analysis Branch within the State Department, whose area experts and diplomats were all too happy to sideline a group of scholars whose skills they saw as redundant to their own.

## Social Science and the Promise of Prediction

Kent initially joined his colleagues in the State Department, but by May 1946 he had become despondent at their subordination within the Foggy Bottom bureaucracy. In this dark moment, Kent was approached by Vice Adm. Harry W. Hill and Maj. Gen. Alfred Gruenther, respectively the commandant and vice commandant of the newly formed National War College. They asked him to join their civilian staff. It was a prestigious offer: The staff already included such notables as George F. Kennan, who would soon publish his famous "X" article in *Foreign Affairs*, "The Sources of Soviet Conduct,"<sup>53</sup> and Bernard Brodie, who had just published *The Absolute Weapon*, the first book to explain how the atom bomb had radically changed military strategy.<sup>54</sup> Kent accepted the job and used the time it afforded him to write *Strategic Intelligence*, a manifesto on "knowledge vital for national survival"<sup>55</sup> and a guide for acquiring and processing it that the intelligence community would come to consider every bit as important as the seminal works by Kennan and Brodie.

Meanwhile, despite its burst of wartime activity, U.S. intelligence was once again in danger of underperforming. The problem this time was not a failure of vigilance — the shock of Pearl Harbor remained vivid, and growing tensions with the Soviet Union made it clear that the United States needed a centralized intelligence agency - but, rather, a failure of execution. In 1947, Congress passed the National Security Act, which, among other things, established the CIA. Nevertheless, the United States was surprised when, in June 1950, North Korea invaded the South. At this point, Truman replaced the CIA's first director with Gen. "Beetle" Smith, Eisenhower's wartime chief of staff. Kent soon received another phone call requesting his service.

In the fall of 1950, Kent met with Smith, who explained that he was establishing an Office of National Estimates, whose sole purpose would be to illuminate, as best as possible, the uncertainty of the future, and that he wanted Kent to join — briefly as deputy and then as director (when the inaugural director, Kent's old R&A boss Bill Langer, would have to return to Harvard). Kent initially demurred, saying that his experience at R&A had concerned research, not prediction, but Smith insisted.<sup>56</sup> So, on Nov. 15, 1950 — the day the Chinese crossed the Yalu River, entering the war and yet again proving the inadequacy of U.S. predictive capabilities - Kent returned to Washington to first help and then lead an effort no one there had attempted before: predicting global affairs.57 As Kent would later put it, "In

56 Kent, Reminiscences, 245.

<sup>57</sup> Sherman Kent, "The First Year of the Office of National Estimates: The Directorship of William L. Langer," in Steury, Sherman Kent and the Board of National Estimates.



<sup>50</sup> Richelson, Century of Spies, 205.

<sup>51</sup> The extent of R&A's contribution is disputed. For example, Barry Katz concludes, "The work these scholars produced was, as a general rule, of exceptionally high quality ... [but] there is precious little evidence that the reports, analyses, and forecasts churned out in the Branch figured decisively in the determination of military or diplomatic policy." Katz, *Foreign Intelligence*, 197.

<sup>52</sup> Diary entry, Sept. 13, 1945, "Conferences with President Truman, 1945," Smith papers (Roosevelt Library) as cited in Thomas F. Troy, "Truman on CIA," *Studies in Intelligence* 20, no. 1 (Spring 1976), https://www.cia.gov/library/center-for-the-study-of-intelligence/kent-csi/vol20no1/html/v20i1a02p\_0001.htm.

<sup>53</sup> George F. Kennan [X], "The Sources of Soviet Conduct," Foreign Affairs 25, no. 4 (July 1947), https://doi.org/10.2307/20030065.

<sup>54</sup> Bernard Brodie, The Absolute Weapon: Atomic Power and World Order (New York: Harcourt, Brace, 1946).

<sup>55</sup> Kent, Strategic Intelligence, vii.

short, if there was any office in the United States Government which was and should have been perpetually wondering about the future and where its perils or the opposite lay, we were it."<sup>58</sup>

Why was Smith so keen to hire Kent? For one thing, R&A had amply shown how valuable academics could be to the military and therefore to national security, and Kent had established himself as the scholar/analyst-in-chief during his tenure. In a 1946 memo to Gen. Hoyt Vandenberg, who headed the Central Intelligence Group (a shortlived postwar precursor to the CIA), Kent argued that "university people" were most qualified for research and analysis work. Kent continued,

Most of the R/A type of functions are best performed by people who are experts in the so-called social sciences, i.e., economics, history, international law, international relations, geography, and sometimes even psychology or sociology.<sup>59</sup>

He also argued that a surge in patriotic sentiment

had given the U.S. government an opportunity to leverage academia, with young scholars eager to serve their country. Kent saw the CIA's establishment as an opportunity to lure the most senior faculty to intelligence work, cultivate the next generation of intelligence analysts, and perhaps even change the way universities thought about their responsibility to national security. Kent was a natural bridge between the previous generation of intelligence analysts and the next — between the successes of R&A and the challenges of ONE.

Smith was also attracted to Kent because of what he had written in *Strategic Intelligence*, a book that Smith's deputy had not only read but also reviewed and discussed with Kent.<sup>60</sup> Among its contributions, the book offered a new taxonomy for intelligence analysis. Whereas previous works might have classified intelligence products according to the intended consumer, the method of collection, or the degree of tactical versus strategic importance, Kent explicitly categorized intelligence analysis *by time* — that is, whether it focused on the past, the present, or the future.<sup>61</sup> Thus, he divided all intelligence into the "basic descriptive form" (the sort of data one might find in an almanac or, today, in the CIA's *World Factbook*), the "current reportorial form" (contemporary information that could come from the day's newspaper or the report of an intelligence operative), and the "speculativeevaluative form" (analysis of what other states were likely to do and what the United States could do to alter their course of action, if necessary).<sup>62</sup>

The first two categories involved description, but the third involved the very thing Smith was looking for: prediction. Kent devoted an entire chapter to the practice and promise of prediction — or "estimation" — concluding that, if one had sufficient descriptive and reportorial information, "intelligence ought to be able to make shrewd guesses — estimates they are generally called — as to what [any country] is likely to do in any circumstance whatsoever."<sup>63</sup>

Kent explicitly categorized intelligence analysis by time — that is, whether it focused on the past, the present, or the future.

That, itself, was a bold prediction. A key reason for Kent's confidence was his assessment of the growing abilities of the "university people" he had praised to Vandenberg:

The social sciences have by no means yet attained the precision of the natural sciences; they may never do so. But in spite of the profound methodological problems



<sup>58</sup> Kent, Reminiscences, 258.

<sup>59</sup> Sherman Kent, "Memorandum for General Vandenberg," Nov. 18, 1946, folder 46, box 41, MS 854, Sherman Kent Papers. To the memo, he appended a list of seven economists, 11 historians and international relations experts, and one geographer, all of whom he felt Vandenberg should consult immediately.

<sup>60</sup> Kent, Reminiscences, 248.

<sup>61 &</sup>quot;On the theory that the consumers of intelligence are interested in things of the past, present, and future, I have adopted the element of time as the element of overruling importance." Kent, Strategic Intelligence, 8.

<sup>62</sup> Kent, Strategic Intelligence, 7.

<sup>63</sup> Kent, Strategic Intelligence, 59.

which they face, they have advanced prodigiously in the last fifty years. Taken as a block of wisdom on humanity their accomplishments are large not merely in the area of description but more importantly in the area of prognosis.<sup>64</sup>

In the event that anyone disagreed, Kent huffily concluded, "If the record did not read thus, this book most emphatically would not have contained a chapter on this element of the long-range intelligence job."<sup>65</sup>

Writing in 1947, Kent was describing radical changes in the postwar academy, both in its practices and in its promises. The social sciences

had been trying to identify causal relationships in human behavior for decades, but whereas they had initially been more philosophical in orientation and qualitative in their evidence, by midcentury the social sciences had begun to turn toward a harder, analytic style that used quantitative methods to test hypotheses.66 They began to treat social systems much like physical systems — that is, subject to discoverable natural laws. As intellectual historian Louis Menand has put it, they adopted a "self-consciously scientific model of research."67 Each of the disciplines underwent a paradigm shift that led to a new emphasis on theory, with a particular stress on modeling. As historian of science Hunter Heyck has catalogued,

Before 1940, zero research articles published in the flagship journals of the five largest social sciences in America described what they were doing as "modeling" something. Zero. By the 1970s, half of all articles in those journals did so.<sup>68</sup>

The use of mathematics similarly spiked, as did the tendency to explicitly connect empirical findings to theoretical literature. Effectively, American scholars thought they would soon be able to codify and quantify human behavior. The result was greater faith in social scientists' ability to explain and predict.<sup>69</sup>

Usable findings are what both scholars and policymakers hoped for. With the war, the academy had ceased to be an ivory tower and instead had become an engine of military innovation as scientists and engineers turned out everything from more reliable ammunition to the atomic bomb. Though in not quite as flashy a fashion, social scientists had made their own contributions to the Allied victory, tweaking and even guiding the war effort to maximize American power — for example, by managing production so as to speed



the manufacture of materiel and by optimizing the effectiveness of military tactics through operations research. Social science had shown that it could have a concrete impact, not simply philosophical implications. It stood to reason that if the social sciences suddenly had a greater base of scholars to draw from (because of the GI Bill), more funding (because of government contracts), and new tools that allowed for more powerful analysis (computers, data, and statistical models), then they could accomplish even more. Menand wrote, "The idea that academics, particularly in

<sup>64</sup> Kent, Strategic Intelligence, 60.

<sup>65</sup> Kent, Strategic Intelligence, 60–61.

<sup>66</sup> Daniel Bell, The Social Sciences Since the Second World War (New Brunswick, NJ: Transaction Books, 1982), 2–5. Dorothy Ross, "The Changing Contours of the Social Science Disciplines," in *The Cambridge History of Science*, ed. Theodore M. Porter and Dorothy Ross, vol. 7 (Cambridge, MA: Cambridge University Press, 2003).

<sup>67</sup> Louis Menand, The Marketplace of Ideas: Reform and Resistance in the American University (New York: W.W. Norton, 2010), 74.

<sup>68</sup> Hunter Heyck, Age of System: Understanding the Development of Modern Social Science (Baltimore, MD: Johns Hopkins University Press, 2015), 18.

<sup>69</sup> Interestingly, statistician Nate Silver has found that use of the word "predictable" surged in academic journals in the 1950s while use of the word "unpredictable" dropped. Nate Silver, *The Signal and the Noise: Why So Many Predictions Fail* — But Some Don't (New York: Penguin Press, 2012), 453.

the social sciences, could provide the state with neutral research results on which pragmatic public policies could be based was an animating idea in the 1950s university."<sup>70</sup>

It was an intoxicating idea that recalled the heights of the Progressive Era. Sociologist Daniel Bell captured the enthusiasm of the moment this way:

To put the question grandly, if physics and its allied sciences have given us a greater and more complex understanding of nature so that we have been able to transform nature, what have the social sciences learned about human nature...[that] would enable us to achieve the utopian visions of our forebears? Or to put the issue in the vernacular: if we have been able to engineer E=MC<sup>2</sup> into a nuclear bomb, and to put a man on the moon, can we educate our children better, design a more pleasing environment, utilize productivity to conquer poverty, or create an "artificial intelligence" that would extend men's powers to think, as machines have extended our physical powers? In the mid-twentieth century these were the promises.71

It was prediction, however, that most concerned the U.S. national security establishment. Smith established ONE because, having been surprised at Pearl Harbor, the United States had to do everything possible to foresee, and thereby forestall, a nuclear Pearl Harbor. The belief that social scientists - experts - were best equipped to make such predictions reflected the contemporary academic worldview, of which Kent was a proponent. "[S]ome of the problems having to do with national survival involve long-range speculations on the strength and intentions of other states, involve estimates of their probable responses to acts which we ourselves plan to initiate. These cannot be dealt with except by the special techniques of the expert," Kent wrote.72 ONE would give him the chance to develop those techniques - and, implicitly, to test the promise of social science.

### **Toward a Science of Prediction**

Smith dubbed ONE the "heart of the CIA." Unlike R&A with its hundreds of scholars, ONE had a research staff of only 25 to 30 people (most with advanced degrees in the social sciences or history), capped by a board of experts (on which Langer, Kent, and other notables served). In addition to intelligence from the agency itself, the bulk of ONE's information came not from libraries but from the Army, the Navy, the State Department, the Atomic Energy Commission, the FBI, and, later, the Department of Defense each of which had its own intelligence operation. An advisory board composed of representatives from each of those agencies decided on what subjects ONE would produce National Intelligence Estimates, or NIEs, which Kent described as one of Smith's "major innovations" - a tool for fulfilling the CIA's legal and bureaucratic mandate to coordinate and disseminate intelligence in a manner that best aided national security.73 ONE thus served a management function — as an office of the only "national" intelligence agency, the CIA — and "had the pen" on all estimates. But its drafts were reviewed by all participating agencies, and the final product was supposed to represent a consensus view.74

The bureaucratic, cooperative, and consensual nature of NIE production — however agonizing it must have been at times - should have lent the process credibility. If everyone from generals to G-men to nuclear scientists participated in a forecasting exercise, it should have been difficult to dismiss the results out of hand. Instead, Kent often found himself confronting a no-win situation. Policymakers who agreed with the conclusions of a given NIE would find it of little value because they had already made the same projections themselves. Policymakers who disagreed with the conclusions would challenge the NIE's methodological validity or even the credibility of those who produced it. And because intelligence is sometimes trumped by exogenous factors (like domestic politics), even the best estimate could be prescient but, in the end, worthless.75

Given such challenges, Kent said, the only thing

74 Kent, "The Law and Custom of the National Intelligence Estimate."

<sup>75</sup> Sherman Kent, "Estimates and Influence," *Studies in Intelligence* 12, no. 3 (Summer 1968), https://www.cia.gov/library/center-for-the-study-of-intelligence/kent-csi/vol12i3/html/v12i3a02p\_0001.htm.



<sup>70</sup> Menand, Marketplace of Ideas, 75.

<sup>71</sup> Bell, Social Sciences, 6.

<sup>72</sup> Kent, Strategic Intelligence, vii-viii.

<sup>73</sup> Sherman Kent, "The Law and Custom of the National Intelligence Estimate," in Steury, Sherman Kent and the Board of National Estimates. The legal mandate came from the National Security Act of 1947, and the bureaucratic mandate came from National Security Council intelligence directives issued in late 1947 and early 1948.

one could do was to produce the most objective and disinterested product possible. Strive to uncover the truth "until it hurts" and present it credibly, and analysts would have the greatest chance of influencing policy.<sup>76</sup> That is why he endeavored to make estimation a scientific process — and to depict it as such. Kent had spent his entire career lauding the scientific method — in *Writing History*, during his time at R&A, and in *Strategic Intelligence*. ONE was no different.

In an article he wrote for the in-house CIA journal

### He anticipated the dangers of confirmatory bias, the importance of allowing dissent, and the need for precision when estimating probabilities.

he helped to establish, *Studies in Intelligence*, Kent likened the formulation of a "perfect estimate" to building a pyramid. Analysts would start with a base of facts and, using the "classical methodologies" of induction and deduction, reason their way to the peak.<sup>77</sup> The ideal progression would move the analyst from "the known to the unknown with a certain amount of tentative foraying as new hypotheses are advanced, tested, and rejected." In a final extrapolation, the analyst might estimate the precise location and shape of the apex — that thing to be known — or "leave the pyramid truncated near its apex [which tells] the reader that you have narrowed the range of possibilities down to only a few."

This was as good a summation as any of how Kent applied the scientific method to forecasting, but, in addition to the "classical methodologies," Kent also advanced a number of novel guidelines. If some of them seem today like common sense, it is worth noting that the psychological mechanisms underlying them would not be understood for decades. In these elements of what Davis called his "analytic code," Kent the historian was something of a savant.<sup>78</sup> He anticipated the dangers of confirmatory bias, the importance of allowing dissent, and the need for precision when estimating probabilities.

#### **Beware Bias**

In addition to being wary of the policy preferences of intelligence consumers, Kent was well aware that analysts could suffer from their own preconceived notions. Armed with (or burdened by) a specific hypothesis, analysts could find themselves all too easily attracted to information that fit, rather than challenged, their beliefs. Kent's worries about bias can be seen in his admonitions to undergraduates in *Writing History*: "Willingness to criticize his own judgments, his own conclusions in the light of what he knows or suspects of his own prejudice is the quality that separates the intellectually honest historian from the irresponsible apologist."<sup>79</sup>

One defense against this tendency, Kent advised, was to explicitly consider multiple explanations:

What is desired in the way of hypotheses, whenever they may occur, is quantity and quality. What is desired is a large number of possible interpretations of the data, a large number of inferences, or concepts, which are broadly based and productive of still other concepts.<sup>80</sup>

In his warning against partiality and his suggestion that it could be tamed by considering multiple explanations, Kent anticipated what is now known as the "confirmation bias." As psychologist Thomas Gilovich puts it, when people encounter evidence that supports their beliefs, they ask "May I believe it?" But when they encounter that which disproves their beliefs, they ask "Must I believe it?"<sup>81</sup> It may seem intuitive that people would prefer information that confirms their beliefs, but it requires a further leap to understand, as Kent did, that disconfirming evidence can be more valuable.<sup>82</sup> What's more, Kent realized just how pernicious confirmation

<sup>76</sup> Quote from Kent, Strategic Intelligence, 41–42. Concept from Kent, "Estimates and Influence."

<sup>77</sup> The quotes in this paragraph are all taken from Kent, "Estimates and Influence."

<sup>78</sup> Davis, "Sherman Kent and the Profession of Intelligence Analysis." Davis highlights similar themes in Kent's work.

<sup>79</sup> Kent, Writing History, 9.

<sup>80</sup> Kent, Strategic Intelligence, 174.

<sup>81</sup> Thomas Gilovich, How We Know What Isn't So: The Fallibility of Human Reason in Everyday Life (New York: Free Press, 1991).

<sup>82</sup> As Kent put it in *Writing History*, "The goal of research is to build better hypotheses than already exist and to establish them as relatively more true: it is to reveal a sharper picture of what happened and to make a closer approach to actuality than anyone has yet contrived." Kent, *Writing History*, 29–30.

bias can be. Modern psychologists believe that it contributes to overconfidence, which may be what Max Bazerman and Don Moore have called "the mother of all biases," with calamitous consequences for decision-making, including national security decision-making, <sup>83</sup> Kent's solution is the basis for various foresight methodologies, such as scenario planning, that explicitly consider multiple possible futures. Indeed, scenario planning is useful, in part, precisely because it reduces the overconfidence that can degrade predictive accuracy.<sup>84</sup>

### **Encourage Dissent**

Recognizing that groups could gravitate toward an artificial consensus — what would become known in the 1970s as "groupthink"<sup>85</sup> — Kent actively encouraged dissent. According to Jack Davis,

In Kent's day, before electronic coordination and review, it was common to assemble in a room 20 or 30 analysts with a wide range of factual expertise and points of view to review a draft assessment, at times fighting their way through the text paragraph by paragraph.<sup>86</sup>

Representatives from different agencies were bound to disagree with one another, and Kent allowed unresolvable disagreements to be included in the texts of NIEs, a practice that continues to this day.<sup>87</sup> More interestingly, he encouraged participants to speak up, even on subjects outside their area of expertise. He recalled,

One ground rule we established very early in the game was that no matter what the nature of the area that a Rep represented, anyone present should feel free to comment on any section of the paper whatsoever. In other words, someone representing the Air Force was free, and actually encouraged, to comment on any of the other areas, say of a political or economic nature.<sup>88</sup>

This was a remarkable management insight. Kent seems to have anticipated, by more than 40 years, the work of organizational behavior scholar Amy Edmondson, who found that the most effective teams encourage an atmosphere of "psychological safety," in which members feel free to voice opinions without worrying that they might hurt their reputation or career.<sup>89</sup> Psychological safety has since been shown to impact outcomes in a variety of high-stakes domains, such as surgical theaters.<sup>90</sup> It is not hard to see how the quality of intelligence analysis could suffer in a psychologically "unsafe" environment.

#### **Be Precise**

Kent had always been a stickler for precise language — his own prose is so exact as to be turgid — and he insisted upon it at ONE.<sup>91</sup> Particularly given the existential nature of Cold War threats, Kent abhorred the "confusions" that had taken hold in the lexicon of intelligence analysts. These vagaries were particularly insidious when it came to estimating probabilities.<sup>92</sup> One day, he recalled in his memoir, "I asked everybody to write down the numerical odds that he ascribed to the expression 'serious possibility.' To my horror, I found that the spread of odds ranged all the way from 80 to 20 to 20 to 80."<sup>93</sup> To rectify the situation, Kent recommended that estimators provide odds (e.g.,

83 Max H. Bazerman and Don A. Moore, Judgment in Managerial Decision Making 8th ed. (New York: Wiley, 2013), 14–15.

84 Paul J.H. Schoemaker, "Multiple Scenario Development: Its Conceptual and Behavioral Foundation," *Strategic Management Journal* 14, no. 3 (March 1993), https://doi.org/10.1002/smj.4250140304.

85 I.L. Janis, "Groupthink," Psychology Today 5, no. 6 (1971): 43–46, 74–76; I.L. Janis, Victims of Groupthink: A Psychological Study of Foreign-Policy Decisions and Fiascoes (Oxford, England: Houghton Mifflin, 1972).

86 Davis, "Sherman Kent and the Profession of Intelligence Analysis."

87 Kent, Reminiscences, 260.

88 Kent, Reminiscences, 259.

89 Amy Edmondson, "Psychological Safety and Learning Behavior in Work Teams," Administrative Science Quarterly 44, no. 2 (June 1999), https://www.jstor.org/stable/2666999. See also Amy C. Edmondson, The Fearless Organization: Creating Psychological Safety for Learning, Innovation and Growth (New York: Wiley, forthcoming).

90 Amy C. Edmondson, "Speaking Up in the Operating Room: How Team Leaders Promote Learning in Interdisciplinary Action Teams," *Journal of Management Studies* 40, no. 6 (August 2003), https://doi.org/10.1111/1467-6486.00386. See also Amy C. Edmondson, *Teaming: How Organizations Learn, Innovate, and Compete in the Knowledge Economy* (San Francisco: Jossey-Bass, 2012).

91 Writing History contains this amusing (at least to modern ears) line: "Avoid those words in current collegiate slang which have little or no precise meaning. For example the word 'meatball' is used now as a term of disapproval when applied to a fellow man. But exactly what the qualities of a 'meatball' are is very difficult to discover."

92 Sherman Kent, "Memorandum for Mr. Baird [Matthew Baird, CIA Director of Training]," Dec. 21, 1953.

93 Kent, Reminiscences, 263.

two-to-one, five-to-one) of an event occurring instead of using the "infantile imprecision of the language of intelligence" (e.g., "good chance," "real possibility," "strong likelihood").<sup>94</sup> When one colleague complained that phrases like "50-50 odds" would make the CIA sound like a "bookie shop," Kent replied, "I'd rather be a bookie than a goddamn poet."<sup>95</sup>

Here, again, Kent was ahead of his time.96 People assign wildly different probabilities to different words. Nevertheless, for decades the U.S. intelligence community resisted assigning quantitative measures to qualitative estimates and, as a result, failed to communicate its forecasts clearly.97 Recent research has shown, however, that one of the primary objections to quantitative probabilities - that they convey a false sense of precision on the part of the analyst — is unfounded.<sup>98</sup> This is true even of specific probabilities as opposed to ranges.99 What's more, in a multiyear geopolitical forecasting tournament sponsored by the Intelligence Advanced Research Projects Activity (IARPA), the best performers were the most granular in the probabilities they assigned their forecasts.100 Apparently, it really is better to be a bookie than a poet!

### **Estimating Kent**

Despite Kent's best efforts, ONE often erred in its predictions. One of its biggest mistakes was its insistence, in September 1962, that the Soviets would not place nuclear weapons in Cuba.<sup>101</sup> In fact, the Soviets had already placed intermediaterange missiles and tactical nuclear weapons on the island, and their discovery by U.S. surveillance precipitated what was probably the greatest crisis in human history — one that could have led to the deaths of hundreds of millions of people. Kent subsequently published an article that critiqued the estimate in detail, assessing how his office got it wrong.<sup>102</sup>

There were other errors as well. In 1973, Robert Gates, a young CIA analyst who would go on to become director of central intelligence and secretary of defense, wrote, "We failed to anticipate the construction of the Berlin Wall, the ouster of Khrushchev, the timing of the invasion of Czechoslovakia, and other events of importance."103 ONE had successes, too, including anticipating the Soviet launch of Sputnik. But evaluating ONE's record is difficult for several reasons: Some facts remain murky, NIEs contained many different judgments, and those judgments were often presented not as testable predictions but as qualitatively expressed degrees of confidence. That is why Abbott Smith, who succeeded Kent as director of ONE, concluded,

What it comes to is this: a complete, objective, statistical audit of the validity of NIE's is impossible, and even if it were possible, it would provide no just verdict on how 'good' these papers have been. Like the Bible, the corpus of estimates is voluminous and uneven in quality, and almost any proposition can be defended by citations from it.<sup>104</sup>

That ambiguity is, in part, why the Nixon administration abolished ONE in 1973. Henry

<sup>104</sup> Abbot E. Smith, "On the Accuracy of National Intelligence Estimates," *Studies in Intelligence* 13, no. 4 (Fall 1969), https://www.cia.gov/library/center-for-the-study-of-intelligence/kent-csi/vol13no4/html/v13i4a04p\_0001.htm.



<sup>94</sup> Kent, "Memorandum for Mr. Baird."

<sup>95</sup> Davis, "Sherman Kent and the Profession of Intelligence Analysis."

<sup>96</sup> Kent's chief treatment of this subject is found in Sherman Kent, "Words of Estimative Probability," *Studies in Intelligence* 8, no. 4 (1964): 49–65, https://www.cia.gov/library/center-for-the-study-of-intelligence/kent-csi/vol8no4/html/v08i4a06p\_0001.htm.

<sup>97</sup> Baruch Fischhoff, Intelligence Analysis for Tomorrow: Advances from the Behavioral and Social Sciences (Washington, DC: National Academies Press, 2011), http://www.nap.edu/catalog/13040.

<sup>98</sup> Jeffrey A. Friedman, Jennifer S. Lerner, and Richard Zeckhauser, "Behavioral Consequences of Probabilistic Precision: Experimental Evidence from National Security Professionals," International Organization 71, no. 4 (Fall 2017), https://doi.org/10.1017/S0020818317000352.

<sup>99</sup> Jeffrey A. Friedman and Richard Zeckhauser, "Handling and Mishandling Estimative Probability: Likelihood, Confidence, and the Search for Bin Laden," *Intelligence and National Security* 30, no. 1 (2015), https://doi.org/10.1080/02684527.2014.885202.

<sup>100</sup> Barbara Mellers, et al., "Identifying and Cultivating Superforecasters as a Method of Improving Probabilistic Predictions," *Perspectives on Psychological Science* 10, no. 3 (May 2015), https://doi.org/10.1177%2F1745691615577794.

<sup>101 &</sup>quot;Special National Intelligence Estimate 85-3-62: The Military Buildup in Cuba," Sept. 19, 1962, https://history.state.gov/historicaldocuments/ frus1961-63v10/d433.

<sup>102</sup> Sherman Kent, "A Crucial Estimate Relived," *Studies in Intelligence* 8, no. 2 (Spring 1964), https://www.cia.gov/library/center-for-the-studyof-intelligence/kent-csi/vol8no2/html/v08i2a01p.htm. He concluded that the Soviets had behaved in a way that was inconsistent with their past behavior and with their understanding of how seriously the United States would view the move. In other words, Kent and his team had expected Nikita Khrushchev to behave "rationally," and he had not.

<sup>103</sup> Robert M. Gates, "The Prediction of Soviet Intentions," *Studies in Intelligence* 17, no. 1 (Fall 1973), https://www.cia.gov/library/center-for-the-study-of-intelligence/kent-csi/vol16no4/html/v17i1a06p\_0001.htm.

Kissinger, who was national security adviser at the time, had become enormously frustrated with the documents' opacity, which he reportedly felt required a "Talmudic" degree of interpretation.<sup>105</sup> He had the National Security Council staff compile its own, competing estimates, and finally CIA Director William Colby replaced ONE with a collection of "national intelligence officers." Those officers were eventually organized into the National Intelligence Council, which still produces NIES.

The challenge in measuring the accuracy of National Intelligence Estimates makes it difficult to judge Sherman Kent's career.

Kent's admirers — and there are many — insist that his contributions were significant, noting his development of intelligence as a "profession." Harold P. Ford paid tribute to his former colleague as "a principal father of the modern intelligence profession."106 Donald Steury, a CIA historian and editor of a volume on Kent, similarly lauded the ONE director's "formative role in the growth of intelligence as a profession."107 And Jack Davis concluded, "If intelligence analysis as a profession has a Founder, the honor belongs to Sherman Kent."108 This is why, in 2000, CIA Director George Tenet dedicated the Sherman Kent School for Intelligence Analysis, saying that it would "prepare generations of men and women for the vital, demanding, and exciting profession of intelligence analysis in the 21st century."109

By the time Kent retired in 1967, American intelligence analysis certainly had become professionalized, especially compared with the ad hoc approach that had marked the early days of R&A, when Kent knew little and was "unable to find anyone who has more dope than myself." As early as 1955, he was able to write of the CIA,

We are officered and manned by a large number of people with more than a decade of continuous experience in intelligence, and who regard it as a career to be followed to retirement. By now we have orderly file rooms of our findings going back to the war, and we have methods of improving the usefulness of such files. ... Most important of all, we have within us a feeling of common enterprise and a good sense of mission.<sup>110</sup>

Crucially, he continued, intelligence "has developed a recognized methodology; it has developed a vocabulary; it has developed a body of theory and doctrine; it has elaborate and refined techniques." In that, it met the formal definition of a profession laid out by sociologist Andrew Abbott, who wrote that "professions are exclusive occupational groups applying somewhat abstract knowledge to particular cases."<sup>nn</sup> Or, as Davis put it, "His analytic code ... perhaps Kent's most valuable contribution, was carefully refined to distinguish professional analysts not only from fortune-tellers and policy action officers, but also from academic specialists on national security affairs." In short, it was a defined, and even rarified, activity.

At the same time, Kent had wanted more: As a historian swept up in postwar scholarly excitement, he wanted to turn intelligence into not simply a profession but a discipline — which is to say, a science. His 1955 article claimed that analysis had taken on "the aspects of a discipline,"<sup>112</sup> but Steury, while praising Kent, argues that he was the "practitioner" of a "craft" — never able to transform intelligence analysis into a science because of his innate preference for empiricism over theory:

Intelligence analysis in the CIA never achieved an explicitly, broadly based epistemological and doctrinal structure. ... Like most historians of his generation, Kent was uncomfortable with theoretical constructs, preferring in their stead empirical judgments that were founded in an ordered methodology.<sup>113</sup>

Despite his occasional claim otherwise, Kent's own writings support this critique. The thing he

<sup>105</sup> Lawrence Freedman, US Intelligence and the Soviet Strategic Threat (Princeton, NJ: Princeton University Press, 1986), 49.

<sup>106</sup> Ford, "A Tribute to Sherman Kent," 25–26.

<sup>107</sup> Steury, "Introduction," 20.

<sup>108</sup> Davis, "Sherman Kent and the Profession of Intelligence Analysis," 2.

<sup>109 &</sup>quot;Remarks of the Director of Central Intelligence George J. Tenet at the Dedication of the Sherman Kent School," CIA speeches and testimony archive, May 4, 2000, https://www.cia.gov/news-information/speeches-testimony/2000/dci\_speech\_05052000.html.

<sup>110</sup> Kent, "The Need for an Intelligence Literature," 2.

<sup>111</sup> Andrew Abbott, The System of Professions: An Essay on the Division of Expert Labor (Chicago: University of Chicago Press, 1988), 8.

<sup>112</sup> Kent, "The Need for an Intelligence Literature," 3.

<sup>113</sup> Steury, "Introduction," 16.

felt intelligence needed most to help it become a discipline was a body of literature, which is why he lobbied for the creation of *Studies in Intelligence*. Its authors, he said, should grapple with "first principles," but by "first principles" he meant, "What is our mission?" and "What is our method?"<sup>114</sup> Despite repeated references to theory, in a quarter-century of intelligence work Kent never articulated an intelligence equivalent of, say, political science's "realism." He never even attempted such a contribution despite his insistence that intelligence needed the kind of brilliant thinkers — he cited Darwin, Freud, Keynes, and Pareto — who had defined or redefined their fields at the theoretical level.<sup>115</sup>

But is such a critique fair? To demand that intelligence analysis, and in particular estimation, be made a discipline is awfully close to asking for Isaac Asimov's science-fiction concept of "psychohistory" — in which statistics provide a guide to the future — to be made real.<sup>116</sup> Barring a deterministic view of human behavior, that is not possible. As Daniel Bell has written,

Most events, even in the physical world, are not completely deterministic but stochastic, i.e., they involve random or chance probability. We do not live completely in a Newtonian universe, either in the microphenomena of quantum physics or in the social world.<sup>117</sup>

Nor are estimates inert observations. Rather, they interact with the policymaking process. An intelligence estimate can be a self-fulfilling or a self-negating prophecy — a hawkish assessment of Soviet policy, for example, could lead to tougher U.S. policy, which in turn could prompt an increase in Soviet military spending.

Social sciences with tasks less intimidating than predicting Soviet nuclear intentions could not maintain the epistemological enthusiasm of the 1950s, upon which Kent drew and to which he contributed. Human systems are complex, and unlike other complex systems — such as the weather — there is often inadequate theory and data with which to accurately model them and, therefore, to predict their behavior. Even economics — the "hardest" of the social sciences — has fared poorly. Economists are largely unable to predict recessions, GDP forecasts have a margin of error of more than 6 percent (which can easily mean the difference between contraction and robust growth), and virtually the entire field failed to foresee the 2008 financial crisis.<sup>118</sup> It may be that social science is more useful for explanation than prediction.<sup>119</sup> The forecasts of geopolitical experts, for example, are on the whole no more accurate than those of the average well-informed citizen.<sup>120</sup>

The purpose in highlighting the shortcomings in Kent's efforts is not to suggest that Kent was a failure — far from it — but, rather, to show that intellectual enthusiasms can overwhelm good judgment. The academy is as vulnerable to fads as any profession and must, therefore, exercise a certain conservatism, especially when it comes to subjects as grand as the future. There are, of course, genuine scientific revolutions, but the future will always retain an element of irreducible uncertainty. That uncertainty is both empowering and threatening. Without it, human beings would lack agency. With it, we are vulnerable to surprise. The best way to cope with this danger is by developing resilience, the ability to adapt to unexpected circumstances.

But the belief in the predictability of the future is once again on the rise. Today, spurred by Big Data, the social sciences are undergoing a shift akin to the one that marked the postwar years. According to Gary King, the head of Harvard's Institute for Quantitative Social Science, "The social sciences are in the midst of an historic change... [with] consequences for everything social scientists do and all that we plan."<sup>121</sup> In King's view, Big Data will lead to a more thorough understanding of why people do what they do. The result, he claims, will be nothing less than a "renaissance" in knowledge production. It is a renaissance that the U.S.

<sup>114</sup> Kent, "The Need for an Intelligence Literature," 5.

<sup>115</sup> Kent, *Strategic Intelligence*, 174. For all the self-assurance with which Kent wrote, whatever the longevity of *Strategic Intelligence*, and despite the brash manner with which he carried himself, this lacuna may have been a source of insecurity. In his memoir, he wrote of ONE's "rarefied intellectual atmosphere" and confessed, "I never completely rid myself of my feelings of intellectual inferiority." Kent, *Reminiscences*, 248.

<sup>116</sup> Isaac Asimov, Foundation (New York: Gnome Press, 1951).

<sup>117</sup> Bell, Social Sciences, 51.

<sup>118</sup> Silver, The Signal and the Noise, chap. 6.

<sup>119</sup> Gerald F. Davis and Christopher Marquis, "Prospects for Organization Theory in the Early Twenty-First Century: Institutional Fields and Mechanisms," *Organization Science* 16, no. 4 (July–August 2005), https://doi.org/10.1287/orsc.1050.0137.

<sup>120</sup> Philip E. Tetlock, Expert Political Judgment: How Good Is It? How Can We Know? (Princeton, NJ: Princeton University Press, 2005).

<sup>121</sup> Gary King, "Restructuring the Social Sciences: Reflections from Harvard's Institute for Quantitative Social Science," PS: Political Science and Politics 47, no. 1 (January 2014), https://doi.org/10.1017/S1049096513001534.

government is supporting through, for example, IARPA and the Pentagon's Minerva initiative. Already, the law enforcement and intelligence communities have established fusion centers around the country to collate and share data in an algorithm-driven attempt to anticipate, identify, and stop threats to national security. Such efforts are powerful but rife with potential problems. Datadriven correlations can be spurious, algorithms may reflect the biases of their programmers, and a glut of data can decrease the signal-to-noise ratio, diminishing, rather than enhancing, the ability to predict.

The enthusiasm for Big Data, however, pales next to that for artificial intelligence, a blanket term for a variety of approaches that enable computers to supplement or surpass human cognition — and even intuition. For example, Bridgewater Associates, the highly successful macro hedge fund, is using artificial intelligence to build a predictive machine. As a statement from the company explains,

We believe that the same things happen over and over again because of logical cause/effect relationships, and that by writing one's principles down and then computerizing them one can have the computer make high-quality decisions in much the same way a GPS can be an effective guide to decision making.<sup>122</sup>

Within the national security establishment, there is great concern about the threat of AI-enabled weapons, but there is little discussion about the threat of AI-driven prediction. Artificial intelligence can be seen as a primarily predictive technology, in that many of its tasks are intended to anticipate what a human would do, including how a human would make predictions. It is a meta-prediction technology. As three scholars at the University of Toronto have written, "As machine intelligence improves, the value of human prediction skills will decrease because machine prediction will provide a cheaper and better substitute for human prediction, just as machines did for arithmetic."<sup>123</sup>

But that argument is undercut by the irreducibility of uncertainty. If uncertainty is endemic, then imagination - the ability to envision possible futures - becomes a matter of vital national interest. Because the future remains at least partly unknowable, the best defense comes from anticipating multiple futures and working backward to find their antecedents in the present. The greatest limitation comes from the ability (or inability) to imagine such futures. "The danger is in the poverty of expectations," as Thomas Schelling wrote in his foreword to Roberta Wohlstetter's classic study of Pearl Harbor.124 This is why the 9/11 Commission's report includes a section on the importance of imagination: "It is therefore crucial to find a way of routinizing, even bureaucratizing, the exercise of imagination."125 Otherwise, surprise - the avoidance of which was the rationale for establishing ONE in the first place — becomes more likely. But imagination is the purview of humans, and in ceding more and more cognitive tasks to machines, the United States risks undercutting its imaginative capacity.<sup>126</sup> That, in turn, threatens its predictive potential and, by extension, American security.

None of this is to deny a central role for AI in prediction or to suggest that human forecasting cannot be improved. On the contrary, research has demonstrated how to improve geopolitical prediction, most notably via the work of Philip Tetlock, a psychologist at the University of Pennsylvania's Wharton School, whose team of scholars participated in IARPA's multiyear tournament. That tournament forecasting generated a slew of findings on the traits, teams, and training that improve forecasting ability.<sup>127</sup> The best forecasters generated by Tetlock's method were reportedly able to outperform CIA analysts by a significant margin.<sup>128</sup> And there is hope that even better forecasting may come from a hybrid

<sup>128</sup> David Ignatius, "More Chatter Than Needed," Washington Post, Nov. 1, 2013, https://www.washingtonpost.com/opinions/david-ignatius-more-chatter-than-needed/2013/11/01/1194a984-425a-11e3-a624-41d661b0bb78\_story.html.



<sup>122 &</sup>quot;Bridgewater Clarifies Its Artificial Intelligence Strategy," ValueWalk, March 12, 2015, http://www.valuewalk.com/2015/03/bridgewaterartificial-intelligence-2/.

<sup>123</sup> Ajay Agrawal, Joshua Gans, and Avi Goldfarb, "The Simple Economics of Machine Intelligence," *Harvard Business Review*, Nov. 17, 2016, https://hbr.org/2016/11/the-simple-economics-of-machine-intelligence. For a longer treatment, see Ajay Agrawal, Joshua Gans, and Avi Goldfarb, *Prediction Machines: The Simple Economics of Artificial Intelligence* (Boston: Harvard Business Review Press, 2018).

<sup>124</sup> Thomas C. Schelling, "Foreword" in Roberta Wohlstetter, Pearl Harbor: Warning and Decision (Stanford, CA: Stanford University Press, 1962), viii.

<sup>125</sup> The 9/11 Commission Report: Final Report of the National Commission on Terrorist Attacks Upon the United States (Washington, DC: Government Printing Office, 2004), 344.

<sup>126</sup> See, for example, Ed Finn, What Algorithms Want: Imagination in the Age of Computing (Cambridge, MA: MIT Press, 2017).

<sup>127</sup> For a readable overview of this research project and its findings, see Philip E. Tetlock and Dan Gardner, Superforecasting: The Art and Science of Prediction (New York: Crown, 2015).

of AI and human efforts.<sup>129</sup> The key is to test those hopes instead of being swept away by them.

This, then, is how Kent is both a beacon and a danger. The danger lies in the hubris of the latest enthusiasm — zeal, after all, is not a methodology — but it is a danger that can be corrected by scientific sobriety, of which Kent is a beacon. In his legacy lies a guide to the promises and the limits of prediction.  $\[mathbb{R}\]$ 

**Acknowledgements:** The author wishes to thank Walter Friedman at Harvard Business School for his advice on this article and to thank Peter Bergen, Andrés Martinez, Fuzz Hogan, and the Fellows Program at New America for their support.

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129 See, for example, IARPA's Hybrid Forecasting Competition as described at https://www.iarpa.gov/index.php/research-programs/hfc.