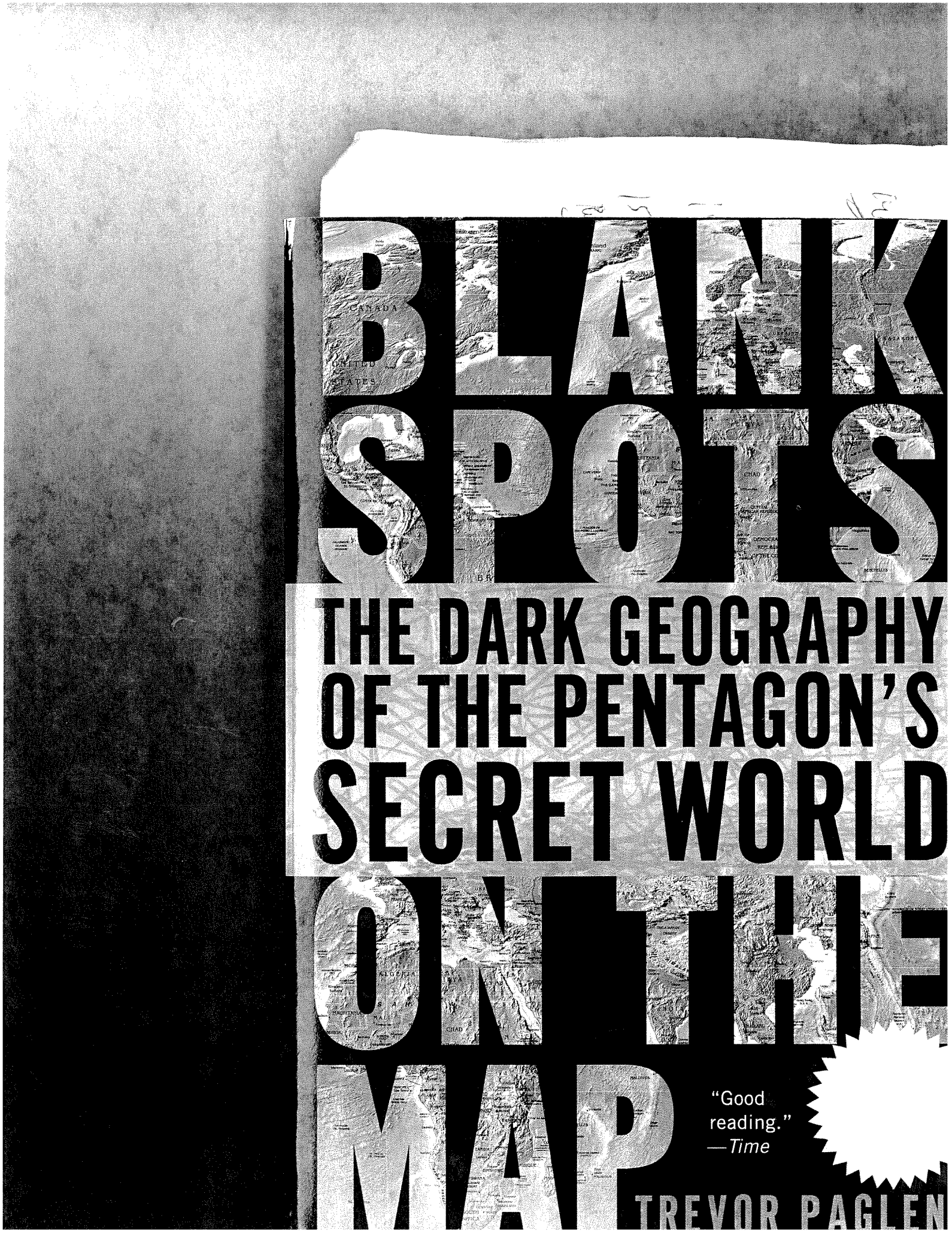
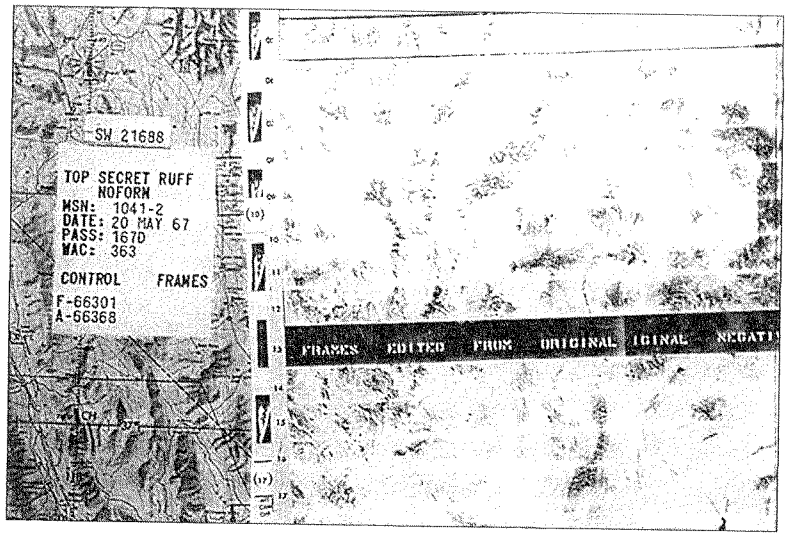

BLANK SPOTS
THE DARK GEOGRAPHY OF THE PENTAGON'S SECRET WORLD
ON THE MAP
"Good reading."
—Time
TREVOR PAGLEN



1

Facts on the Ground
Berkeley

The geography department at U.C. Berkeley lies on the relatively quiet north side of campus near the corner of Hearst and Euclid avenues in a building named after a former CIA director. The department's home is on the fifth floor of McCone Hall, a name commemorating John McCone, whom Kennedy appointed CIA head after the Bay of Pigs disaster. Having a geography building named after a CIA director somehow makes sense. The building, after all, plays host to a handful of social scientists who spend much of their time traveling around the world, collecting, analyzing, and publishing information about faraway, and sometimes not so faraway, places. A social scientist's work can be remarkably close to that of an intelligence analyst for the CIA or NSA. The lines separating academia from state power can get exceptionally

blurry. Across campus from the geography department, at the Boalt law school on the corner of Bancroft and Piedmont avenues on the eighth floor of Simon Hall, is the office of John Yoo. While working in the Bush administration's Office of Legal Counsel, Yoo authored legal opinions authorizing everything from CIA renditions to "enhanced interrogation techniques" to warrantless surveillance of Americans by the National Security Agency. Upon leaving the Bush administration in 2003, Yoo returned to his professorship at Berkeley. In an age where information is power, it doesn't take much investigative work to find all sorts of connections among the academy, the military, and the intelligence industries. One doesn't even have to walk across campus. Every spring, like clockwork, recruitment letters from the National Geospatial-Intelligence Agency show up at McCone Hall, encouraging young scholars to join the intelligence community's own version of the geography department.

When most people hear the word "geography," they're reminded of traumatic elementary school quizzes on the names of rivers, mountain ranges, and state capitals. People think of maps. But although the discipline finds its origins in Renaissance exploration and the imperial mapmakers of royal courts, contemporary geographic research has come a long way. Geographers nowadays do everything from building elaborate digital climate models of potential global warming scenarios to picking through bits of fossilized pollen to reconstruct prehistoric agricultural practices, and from tracing the light-speed flows of international capital to documenting localized effects of nature tourism on sub-Saharan village life. The discipline, in short, accommodates a wide range of research methods and topics all united by the axiom that everything happens somewhere, that all human and natural phenomena have, well, a geography.

In McCone Hall's basement is the earth sciences library, featuring discipline-specific books and journals; it houses an extensive map collection as well, in a back room filled with flat files. The library's collection also includes an archive of United States Geological Survey (USGS) aerial images, all neatly indexed in an old-fashioned card catalog.

I've spent a lot of time looking at those aerial images. Years before Google Earth went online, I was using the archive to research prisons. With the onset of the "war on drugs" in the early 1980s, California had embarked on the largest prison-building project in the history of the world. The state had built thirty-three prisons in just a few decades. Over the previous 132 years, California had built just twelve. The aerial images helped me to understand where prisons were, why they were there, and what made California's newest prisons different from those of the past.

California's new prisons had little resemblance to their older cousins like Folsom and San Quentin, now immortalized in the songs of Johnny Cash. The new prisons were marvels of engineering, dense prefabricated cities of razor wire and white concrete that could go up at almost a moment's notice. Unlike earlier penitentiaries like Alcatraz, located prominently in the public view as a haunting visual reminder not to break the law, California's new industrial prisons were built far away from urban centers in the poorest and remotest regions of the state, out of sight and, to most of California's population, out of mind. From time to time, stories of torture and extreme violence make their way into the news. At Pelican Bay, California's premier "super-max" prison in the forest near the Oregon border, guards boiled a man named Vaughn Dortch alive. In a 1995 ruling stemming from abuse at the prison, federal judge Thelton Henderson wrote that "dry words on paper cannot adequately capture the senseless suffering and sometimes wretched misery that Pelican Bay State Prison's unconstitutional practices leave in their wake."

At Corcoran State Prison in California's Central Valley, guards staged "gladiator days," sending prisoners who were known ene-

mies into a small yard and betting on which prisoner might prevail in the ensuing mayhem. When fights got out of control, guards trained their weapons on the prisoners. Gunfire was a daily occurrence. In the eight years after Corcoran opened, eight prisoners had been shot dead and fifty wounded. The guards nicknamed Warden George Smith "Mushroom George" because "mushrooms like being kept in the dark and fed shit."

I hypothesized that the prison's physical distance from urban centers translated into a kind of cultural distance: Their geography translated into secrecy. Few outsiders regularly visited the prisons in California's hinterlands. Volunteer-led programming was at a minimum. Visits by family members, journalists, and academics were few and far between. It seemed to me that there was a strong connection between geography, secrecy, and extralegal violence at the prisons.

To understand these prison geographies, I started collecting aerial and satellite images of these "next generation" prisons from all over the Southwest: California, Nevada, Arizona, and New Mexico. I wanted to see what these places looked like from the God's-eye view that aerial images uniquely afforded. How close were they to other institutions? How did they change over time? How was the land being used before the prisons came? As I continued exploring Berkeley's image archive, my focus started to wander. I took to pursuing images for their own sake, indulging myself in the spindly landscape aesthetics of fluvial fans, the circular shapes of desert agriculture, and the fading footprints of abandoned settlements and ghost towns.

As I worked my way through the archive, I noticed that vast swaths of land, particularly in the Nevada desert, were missing from the imagery collections. I assumed that my own ineptitude with the image archive's antiquated filing system was to blame. I expanded my search to the entire USGS archive, plugging longitudes and latitudes into a government search engine to retrieve

image previews. When I did that, I stumbled across a series of images that left me flabbergasted: black plates with stenciled white letters reading simply FRAMES EDITED FROM ORIGINAL NEGATIVE. Someone, somewhere, in some official capacity, had deliberately removed these plates from the archives. I was startled to find blank spots on the official map, an image that hearkened back to an earlier age.

Blank spots on maps were a hallmark of Renaissance cartography. Early modern geographers like Henricus Martellus, having rediscovered works of ancient Greek geography such as Ptolemy's *Geography*, used ancient Greek cartographic projections to depict the earth's known surface. Martellus's maps from 1489 updated the ancient Greek projections to include data from Marco Polo's journeys and Portuguese voyages down Africa's coast. His maps portray Africa as a long, distorted, and featureless swath of land, and Southeast Asia as a contiguous landmass extending far into the Southern Hemisphere. Australia is missing entirely. After Columbus and Portuguese explorers began charting the New World, vast new blank spots appeared on contemporary maps. The Cantino planisphere, one of the earliest surviving maps to the New World, shows fragments of North and South American coastlines. Beyond them, the world is vast, empty, and unexplored.

It was hard for me to believe that here, at the dawn of the twenty-first century, there could be such a thing as an unmapped space. Our world has maps for just about everything imaginable: With GPS-enabled navigation systems, it is impossible for modern ship captains to get lost at sea. Real-time weather satellites transmit up-to-the-minute atmospheric conditions to anyone connected to the Internet or with access to a shortwave radio. Google Earth provides detailed, scalable satellite images of nearly every inch of the world's surface. Maps from the United States Geological Survey contain precise topographic and elevation data for the world's landforms. There are maps for the ocean's deepest

trenches and maps of the outer planets; cosmological maps describe the large-scale structures of the universe itself, while maps of the human genome chart human life's most basic building blocks. The world, in short, has been elaborately and meticulously mapped. The images I was looking for were missing, not because the desert hadn't been mapped, but because what they showed was secret.

As it turns out, this also had a historical precedent. During the age of exploration there were two kinds of maps: Some were intended for general consumption, others were tightly held state secrets. The maps Magellan used to circumnavigate the globe, for example, were of the latter sort. Although Magellan's maps were rife with blank spots showing the limits of Spanish exploration, they contained far more detail than the public maps. The Portuguese and Spanish empires' secret maps revealed landforms and trade routes the rival empires sought to hide from one another. Other, deliberately inaccurate, maps were produced and "leaked" from one empire to another in elaborate disinformation and deception campaigns. The "real" maps were the empires' greatest secrets, documents so sensitive that an unauthorized person caught with them could be put to death. The maps themselves, and control over the information they depicted, were instruments of imperial power. As author Miles Harvey put it, "The Portuguese controlled the Indies because the Portuguese controlled the maps."

I didn't tell my fellow geographers about my growing fascination with places that had been erased from the public record, although I did locate an old Soviet reconnaissance photo of the black site near Groom Lake, which I posted on my office door as an inside joke to myself. In my free time, I started consuming everything I could on the topic of secret places. Sifting through stories of secret aircraft and black military operations, I realized that I already knew something about this world. As the son of an Air

Force doctor, I'd grown up on military bases all over the world, and like so many other people who grow up in the military, I had always assumed that I'd end up in the service as well, hopefully as a fighter pilot. It was the only world I knew. I was fascinated by aircraft like the SR-71, whose engines seemed to split open the sky itself when its black cobra-like airframe swooped down over annual base air shows. I knew that its performance characteristics were highly classified—almost no one really knew how fast or how high it could fly. When my father fixed up some of the pilots, he was invited to Beale Air Force Base to see the aircraft up close. I remember him arriving home that evening and saying that the plane could go a lot faster than what it said in *The Guinness Book of World Records*. Later on, as a teenager, I'd drink tequila with guys returning from Special Forces missions, who could never say where they'd been or what they'd been doing after returning home. My high school friends and I agreed that the SF guys all had a few screws loose but we were happy to take advantage of their alcohol ration cards.

As I started to research black sites in earnest, I was surprised by the lack of serious literature about them. To be sure, I could find plenty of soft documentaries about places like Groom Lake; the UFO literature abounded with references to "secret bases" like Area 51 and Hangar 18 at Wright-Patterson Air Force Base in Ohio. There were a handful of articles in more legitimate magazines like *Popular Science*. References to the black sites near Groom Lake and Tonopah showed up from time to time in defense industry publications like *Aviation Week & Space Technology*, mostly in articles speculating about new, still classified, warplanes. A few notable books had taken up the subject of secret airplanes or the psychology of UFOs, but the more I looked, the more I discovered another blank spot of sorts: There was very little scholarship on black sites. In other words, there was a blank spot in the literature.

There aren't a lot of things that someone, somewhere in the

halls of academia, hasn't dedicated their life to exploring. The halls of universities play home to people studying some of the most obscure phenomena imaginable, from the life cycles of Siberian slime molds to the geologic makeup of Pluto's moons, and from the question of whether there's something objectively good about eating chocolate to the historical lineage of a particular line in a James Joyce novel. No doubt, at this very moment a handful of scholars are engaged in passionate, even vicious debates on those very topics at conferences and in the pages of peer-reviewed journals. That's one of the wonderful things about academia: Someone, somewhere, is studying just about anything and sharing their theories and findings with a cast of international colleagues. With this in mind, the fact that I couldn't find a serious body of literature on black sites puzzled me. But it wasn't entirely surprising, either: Tales of hidden air bases and secret weapons tend to be so entwined with conspiracy theories and other sorts of fringe vernacular myths that the average academic would have a hard time acknowledging that sort of research to their colleagues, much less get funding to support the work.

At the same time, however, black sites were taking on a different cultural meaning. Not only were they real, they were deadly serious. In an October 12, 2001, memo, Attorney General John Ashcroft instructed all federal agencies and departments to err on the side of secrecy when processing Freedom of Information Act requests, ending the Clinton era's "presumption of disclosure." A few months later, the CIA was interrogating terror suspect Abu Zubaida at an "undisclosed location" after his early 2002 capture in Pakistan. In the Office of Legal Counsel, my colleague John Yoo was writing legal briefs authorizing the creation of "ghost prisoners" and other opinions that would become collectively known as the "torture memos." By 2003, classified military spending equaled the Cold War highs of the Reagan era. Vice President Dick Cheney's frequent jaunts to "undisclosed" or "secure" locations became the

stuff of comedy. His comments about having to work on the "dark side" in the war on terror would become emblematic of what Alberto Gonzales called the "new paradigm." Blank spots on maps were coming to define the twenty-first-century United States, just as they have defined empires of the past.

Most social scientists who've studied secrecy have done so by developing Max Weber's pithy comments on the subject from his posthumously published *Wirtschaft und Gesellschaft (Economy and Society)*. These oft-quoted lines are from his chapter on bureaucracy:

> Every bureaucracy seeks to increase the superiority of the professionally informed by keeping their knowledge and intentions secret. Bureaucratic administration always tends to be an administration of "secret sessions": in so far as it can, it hides its knowledge and action from criticism . . . The concept of the "official secret" is the specific invention of bureaucracy.

The Weberian thesis applies to bureaucracies in general: The DMV, or your Parent-Teacher Association, or your Rotary Club, or your local softball league is just as unlikely to disclose its mistakes as the CIA. In the Weberian scheme secrecy is little more than an unintended effect of modern bureaucratic organization.

But the CIA isn't your softball league, and this is where the Weberian thesis falls short. State secrecy is a form of executive power. It is the power to unilaterally and legitimately conceal events, actions, budgets, programs, and plans from the legislature and public at large—the people who are paying for it. State secrecy is a form of monarchical power that contemporary states have inherited from the kingdoms of yesteryear. In our American system, state secrecy is the provenance of the executive branch; it has little statutory basis. It is a tool of kings.

And so, while this book is about state secrecy, it is, more im-

portantly, a book about democracy; it is about how the United States has become dependent on spaces created through secrecy, spaces that lie outside the rule of law, outside the Constitution, outside the democratic ideals of equal rights, transparent government, and informed consent.

It seems to me that when we think about secrecy, it's helpful to think about it in terms of geography, to think about the spaces, landscapes, and practices of secrecy. We live in a world that can often seem supremely abstract, ungrounded, and confusing, especially when it comes to matters of politics and notions of democracy. I think that trying to understand secrecy through geography helps make the subject more real. Thinking about secrecy in terms of concrete spaces and practices helps us to see how secrecy happens and helps to explain how secrecy grows and expands.

State secrecy is an amalgam of logics and practices with a common intent: to conceal "facts on the ground," to make things disappear, and to plausibly deny their existence. To accomplish this, military and intelligence officials create "secure" facilities in military bases and in research institutions, clandestine outposts in the corners of vast deserts, and develop elaborate cover stories and false identities to disguise surreptitious programs. State secrecy means pulling satellite photographs out of public archives, instituting security clearances, compartmentalizing information, and forbidding workers to speak about what it is that they do. But geography theory tells us that it really isn't possible to make things disappear, to render things nonexistent. Geography tells us that secrecy, in other words, is always bound to fail, and because secrecy is always bound to fail, perhaps counterintuitively, it tends to grow ever stronger.

Geography tells us that it's impossible to take something that exists and make it nonexistent at the same time. "Geography," my friend and colleague Allan Pred used to say before he passed away,

is "an inescapable existential reality. Everybody has a body, nobody can escape from their body, and consequently all human activity—every form of individual and collective practice—is a situated practice and thereby geographical." What this means is that secrecy can only work as a Band-Aid, a way to cover something up. But just as a Band-Aid announces the fact that it conceals a wound, blank spots on maps and blacked-out documents announce the fact that there's something hidden. Secrets, in other words, often inevitably announce their own existence. For example, when the government takes satellite photos out of public archives, it practically broadcasts the locations of classified facilities. Blank spots on maps outline the things they seek to conceal. To truly keep something secret, then, those outlines also have to be made secret. And then those outlines, and so on. In this way, secrecy's geographic contradictions (the fact that you can't make something disappear completely) quickly give rise to political contradictions between the secret state and the "normal" state. In order to contain those political contradictions, new ways of practicing secrecy are created and deployed. This is one of the reasons why secrecy reproduces itself, why it tends to sculpt the world around it in its own image.

Since the Second World War the secret world has grown dramatically. Covert operations and classified programs have placed new forms of sovereign power in the hands of the executive branch, institutionalized dishonesty and disinformation, and thoroughly militarized the national economy. Secret programs, and the social, cultural, legal, and economic blank spots that they represent, have transformed and continue to transform the United States in their own image.

More often than not, their outlines are in plain view.

It was the weekend, and campus was relatively quiet. No throngs of students meandering to morning classes, no activists handing

out flyers for one thing or another, no overtaxed professors rushing around from meeting to meeting, quietly hoping not to bump into their graduate students en route. As I stepped into McCone Hall and turned down the corridor to face my office, I noticed someone standing outside my door. The well-groomed man, who must have been in his late thirties, sported casual J. Crew–style clothes and held himself with the disciplined poise of a military officer. From his appearance, I knew a few things about him: He was too old to be an undergraduate, too well-dressed to be a professor, and his posture was too good for him to be a graduate student. I hung back watching, trying to figure out what he was doing outside my office.

After a few moments, he crouched down to stare at the photograph I'd put in a plastic frame outside my door, the Soviet satellite photo of the base at Groom Lake that was the redacted image from the archive. The man stared long and hard at the image, which intrigued me because it depicted something rather esoteric. As I continued standing at the end of the hallway watching, the man started opening the frame to take my photograph out. It was time for an intervention. I ran up and asked him why the hell he was trying to steal my picture.

The stunned man apologized, stammering that he was only interested in the photo because he'd never seen such a clear picture of the site. He just wanted a closer look.

"Do you know what that place is?" I asked.

"Yes; do you know what that place is?" came the reply.

"Yes."

After a long pause, he said, "I used to be a fighter pilot."

Back when he flew F-15s, he explained, they'd have big war games out in the Nevada desert, learning how to dogfight and fly combat missions in the Air Force's version of *Top Gun*, called Red Flag. They had a huge amount of airspace for these war games, he explained, but there was one place, in the middle of the range,

they weren't supposed to fly into—the place in the photo. He said it was called "the Box." You weren't allowed to fly anywhere near the Box, he explained. Even if you were running out of gas and needed an emergency landing strip, you were supposed to bail out rather than land on the runway in the Box.

Eventually, the man let out that one of his buddies from the fighter squadron had actually landed there. Running out of fuel over the Nevada desert, the man's friend had decided to spare the taxpayers the $30 million cost of the warplane, and perhaps his own life, by declining to pull the F-15's ejection seat. Instead, he landed in the Box. When the wayward pilot returned to his squadron more than a week later, his fellow pilots laid into him: He'd flown into the Box; he wasn't supposed to do that under any circumstances; what happened? The pilot just shrugged his shoulders; he couldn't say.

Pointing to the satellite photo outside my door, the pilot said, "That place is part of the black world."

4

Wastelands

Basin and Range

I first heard the silence just before dawn in central Nevada's Railroad Valley. I'd driven all night after an evening seminar at Berkeley on a three-day trip to circumnavigate the Nellis Range in my battered Acura hatchback. Pulling over to the side of Highway 375 to relieve myself, I shut the car door and heard it. Nothing. Nothing at all. No wind rustling clumps of dry sage, no insects buzzing to and fro, no cars in the distance or birds fluttering across the valley's dry desert dust. It was as if the world had simply stopped, and I had been left in the vacuum of Earth's aftermath. The absolute silence engulfed me, imparting to me that I was alone like I had never been alone before.

Although I didn't know it at the time, I wasn't the first person to hear this. Physicist Freeman Dyson had heard the same silence

when he arrived in Nevada in the early days of nuclear weapons. "It is a soul-shattering silence . . .," he wrote. Echoing Hebraic prophets wandering the deserts outside Jerusalem, Dyson described it as the silence of "being alone with God." The absolute stillness tore at something inside the physicist: "There in that white flat silence I began for the first time to feel a slight sense of shame for what we were proposing to do. Did we really intend to invade this silence with our trucks and bulldozers and after a few years leave it a radioactive junkyard?"

The Basin and Range is a place that is at once so still, so vast, and so unfamiliar that it seems to transcend space and time itself, like a vision of the world after the world itself is no more. But it is also violently alive.

From the sky, the rocky mountains of the Basin and Range look like a set of tidal waves flowing from Salt Lake City to the west. Some of the ranges crash into the eastern Sierras; others lose their energy and flow harmlessly into the Mojave Desert like ankle-sized swells lapping onto a sandy beach. Each mountain range can span more than a hundred miles on a roughly north-south axis and reach heights well over ten thousand feet. They're the product of a world that is literally being torn apart. As the North American plate stretches from east to west, Nevada's mountains hurtle toward the sky, riding the planet's molten mantle just below. Nevada's topography, hundreds of miles of basins, faults, and ranges, is the swells, scars, and stretch marks of a geologic upheaval unfolding over eons.

The Sierra Nevada in Eastern California is a blockade to rain and water coming from the Pacific Ocean, stopping eastbound moisture in its tracks and creating a desert out of Nevada's mountains and valleys. Most of the little water Nevada receives comes in the form of winter snowfall, the bulk of which evaporates as soon as it begins to melt. The water that manages to trickle down the ranges forms small seasonal streams, which collect in shallow

dry lakes. When desert winds blow across the shallow lakes, the surface ripples spread and condense the underlying sediment like a work crew smoothing concrete on a new sidewalk. The end result is a landscape marked by endless dry lakes, smooth and hard enough to land an airplane on.

For those who haven't spent their lives in the Basin and Range, the landscape is as inscrutable as it is vast. It is filled with illusions, deceptions, and redirections. Distances are notoriously difficult to judge. The weather changes instantaneously from blazing to frigid, from clear skies to lightning storm, and from bone-dry to impassable flash floods that are gone again in the blink of an eye. Then there are the mirages, the reflective horizons that promise water and sometimes deliver. But it's almost impossible to tell the difference between what's really there and one of the desert's cruel tricks.

On a map from 1863 I found in the Berkeley library, created after Nevada joined the union, the region surrounding most of the state's interior was marked by the simple words UNEXPLORED TERRITORY, a precursor to the FRAMES EDITED FROM THE ORIGINAL NEGATIVE that I had found years earlier. The Southwest was one of the United States' original blank spots on the map.

For settlers trekking across the desert in the mid-nineteenth century, lured by the promise of gold on the other side of the Sierras, Nevada was an unknown and terrifying space, a space where European folk did not want to go. The Basin and Range was synonymous with pestilence and death. The settlers' main route through the "wastelands" was a thin path along the Humboldt River, about where present-day Highway 80 traverses the desert. And those souls who, guided by the promise of a better future, made the journey though the desert described what they saw in their diaries: As they traversed the Great Basin's jagged cliffs, vast dry lakes, and lonely waterless valleys, they described a nightmarish world of heat, thirst, violence, and horror. Lacking words for

the western landforms so unlike anything in Europe, the settlers drew upon what they did have a language to describe: Hell.

"Here, on the Humboldt," wrote Horace Greeley of his 1859 journey, "famine sits enthroned, and waves his scepter over a dominion expressly made for him." Reuben Cole Shaw explained in his diary,

> The reader should not imagine the Humboldt to be a rapid mountain stream, with its cool and limpid waters rushing down the rocks of steep inclines, with here and there beautiful cascades and shady pools under mountain evergreens, where the sun never intrudes and where the speckled trout loves to sport. While the water of such a stream is fit for the gods, that of the Humboldt is not good for man or beast. With the exception of a short distance near its source, it has the least perceptible current. There is not a fish nor any other living thing to be found in its waters, and there is not timber enough in three hundred miles of its desolate valley to make a snuff-box, or sufficient vegetation along its banks to shade a rabbit, while its waters contain the alkali to make soap for a nation, and, after winding its sluggish way through a desert within a desert, it sinks, disappears, and leaves inquisitive man to ask how, why, when and where?

Horace Belknap was more succinct: "meanest and muddiest, filthiest stream. Most cordially I hate you."

Nor was the Humboldt Sink the crystal-clear oasis the forty-niners might have imagined. Shaw writes,

> On arriving at the sink of the Humboldt, a great disappointment awaited us. We had known nothing of the nature of that great wonder except what we had been told by those who knew no more about it than ourselves. In place of a great rent in the earth, into which the water of the river plunged with a terrible roar (as pictured in our imagination), there was found a mud lake ten miles long and four or five miles wide, a veritable sea of slime, a "slough of despond," an ocean of ooze, a bottomless bed of alkaline poison, which emitted a nauseous odor and presented the appearance of utter desolation. The croaking frogs would have been a redeeming feature of the place, but no living thing disturbed the silence and solitude of the lonely region. There were mysteries and wonders hovering over and around the sink of Humboldt, but there was neither beauty nor grandeur in connection with it, for a more dreary or desolate spot could not be found on the face of the earth.

Of his camp near the Humboldt Sink, Vincent Geiger described a space of death, where "the most obnoxious, hideous gases perfumed our camp . . . arising from the many dead animals around."

Past the river's terminus at the Humboldt Sink lay sixty miles of desert emigrants had to pass, a trek that spanned days without water or shade before reaching the Truckee River. One emigrant described the landscape as having "large rocks and deposits of lava and the whole surface appear'd cover'd with ashes looking like the effects of some earthquake or volcano, the stones appearing to have melted and run together." The stretch was littered with death and wreckage: "Where we started this morning," wrote Charles Glass Gray, "there was a lot of dead oxen, broken wagons, wheels and lots of iron fixtures scatter'd in every direction. I counted 160 oxen, dead and dying and wandering about scarce able to stand up—being left here to die!" Later that day, "seventy dead animals were counted in the last 25 miles. Pieces of wagons also, the irons in particular—the wood part having been burnt—were also strewn along. An ox-yoke, [a] wheel and a dead ox, yoke, and wheel; and a wheel, dead ox, and a yoke, was the order of the

day, every hundred or two hundred yards." Milus Gay wrote that "such destruction of property as I saw across the Desert I have never seen I should think I passed the carcasses of 1200 head of cattle and horses and a great many waggons Harnesses-cooking utensils-tools water casks etc. etc. at a moderate estimate the amount I would think the property cost in the U.S. $50,000. We also see many men on the point of starvation begging for bread."

Upon completing the trip, one emigrant wrote that "until one has crossed a barren desert, without food or water, under a burning tropical sun, at three miles an hour, one can form no conception of what misery is." Forty-niner Alonzo Delano wrote that "any man who makes a trip by land to California, deserves to find a fortune," after making the journey himself.

And that route was north of the present-day test sites. It was the "easy" route to California.

Few traveled through the regions of the present-day Nellis Complex, and the few who haphazardly braved the southern desert barely escaped with their lives, if they escaped at all. When William Lewis Manly decided to take a "shortcut" to California via the "Southern Route" in 1849, the result was catastrophic. Climbing mountains alongside his party's chosen route, Manly later wrote, "I saw that the land west of us looked more and more barren." When Manly finally emerged from the desert starving and dehydrated, he described a landscape of "dreadful sands and shadows . . . exhausting phantoms, salt columns, bitter lakes, and wild, dreary, sunken desolation . . ."

Twenty years after Manly narrowly escaped death on a trek that took his party near Groom Lake and onward through Death Valley, Lieutenant George Montague Wheeler was charged by the Army Corps of Engineers with undertaking a "reconnaissance" mission through the same territory, a region Wheeler described as "hitherto unexplored." Wheeler's objective in mapping out "one of the most desolate regions upon the face of the earth" was to describe the physical features of the landscape, survey potential mining sites, note potential routes for future roads and railroad lines, describe the "numbers, habits, and disposition of the Indians who may live in this section," and, tellingly, to identify and select sites "as may be of use to future military operations."

"All the tribes, without exception, belong to that wild, roving breed known as 'Mountain Indians.' Their lawless and migratory life has carried them beyond the notion of anything like order, even among their own people," wrote Wheeler of the native peoples, but he conceded that "it is almost impossible to obtain white guides who have any accurate knowledge of regions sensibly new, while hardly any nook or corner can be found not well known to the Indian." The "unexplored" land Wheeler's reconnaissance mission was to chart had after all been well-explored for many generations. Wheeler possessed little sympathy for Nevada's natives. Although "they are quite intelligent, and were very friendly," he wrote, "Virtue is almost unknown among them, and syphilitic diseases very common." Per his own estimation, Wheeler's mission gave him ample "opportunity for studying the Indian character," but his dealing with them "has in no way produced a sympathy with that class of well-intentioned but ill-informed citizens who claim that the Indians are a much-abused race." Despite his disdain for the indigenous peoples, Wheeler found one praiseworthy attribute: "They have . . . a wonderful regard for superior force." After the "Indian difficulty is settled" and the railroads came, he remarked, the development of the Southwest could proceed.

Development spelled ruin for native peoples. Mines poisoned the land with mercury and cyanide; whites cut down trees for fuel. Cattle devoured the plants native peoples relied on for food. Local game was frightened away. The brutality was not merely environmental. Invading settlers raped mothers in front of their children, attacked Western Shoshone women, and slaughtered

native peoples indiscriminately. In the 1860s and '70s, Nevada's main newspaper, aptly titled *Territorial Enterprise*, advocated "exterminating the whole race." Decades later, those words would echo through the mouth of a deranged Mr. Kurtz in Joseph Conrad's novel about colonialism's heart of darkness: "Exterminate all the brutes."

"History doesn't repeat itself, but it does rhyme," said Mark Twain, who spent his fair share of time traversing the West. So too with human geographies. Landscapes are built upon the foundations of what came before. "Nothing disappears completely . . . ," wrote Henri Lefebvre. "In space, what came earlier continues to underpin what follows. . . . Pre-existing space underpins not only durable spatial arrangements but also representational spaces and their attendant imagery and mythic narratives." For the French geographer, it wasn't just that landscapes were built on foundations laid in the past, but that the way we see a particular place is also guided by what others before us saw. What we see strongly guides what we do: To an extent, we enact what we imagine. When early explorers and settlers first came to the Basin and Range, they saw a wasteland. Then they laid waste to it.

Beginning in the early 1960s, history began to rhyme once again when the Department of Energy and the military began setting off nuclear weapons in the desert. Mushroom clouds lit the skies, and fallout fell like snow. The explosions were called tests but were nonetheless full-fledged dress rehearsals for Armageddon, perhaps more. Among the desert's longtime residents, the difference between "nuclear testing" and "nuclear war" was far from self-evident.

One day in October, as the beginnings of winter added a dry chill to the desert wind, I drove along Highway 80 parallel to the Humboldt River in a big white Suburban along roughly the same route the settlers had trekked almost two centuries earlier. In a matter

of minutes, I'd blown through the stretch of desert between the Carson Sink and the Truckee River that had once been littered with abandoned wagons and pack-animal corpses, and where so many westbound pioneers met their fate in the unforgiving desert. I turned south near Elko and drove into the Crescent Valley, looking for another base of sorts. This one was only slightly easier to find than the "nonexistent" military facilities two hundred miles south.

Scribbled on a page of paper torn from a spiral notebook, my directions said "white, single wide trailer—first trailer facing the road across the street from the old baseball diamond." When I arrived at a cluster of trailers about a mile past the convenience store, I realized that I had no idea what the directions meant, so I knocked on the first plausible door.

A young woman with long, dark hair named Okaadaka answered and invited me into the dilapidated structure. Unpacked suitcases sat in the corner, fresh with baggage tags marked ELY, the closest airport to the Crescent Valley (several hours away). Files, papers, and pamphlets were piled high on every horizontal surface. Flyers, maps, and pictures were plastered on the far wall. This trailer was home to the Western Shoshone Defense Project, and from this remote location, an elderly Native American woman named Carrie Dann and her staff of two full-timers and two part-timers take on the military, the Bureau of Land Management, mining and defense contractors, and the U.S. government itself. Dann says that the United States has been illegally occupying Western Shoshone land for 150 years and that she has the paperwork to prove it.

As I sat in the unmarked trailer with Dann, Okaadaka, and a human rights lawyer named Julie Fishel, who works with the defense project, Dann explained that their work began in 1992, two decades after the Bureau of Land Management started harassing Dann and other Western Shoshone in the area for "trespassing."

The Shoshone provoked the BLM's ire by refusing to pay grazing fees for allowing their cattle to wander through the Crescent Valley. "I've never seen any documentation that says the Western Shoshone ever gave their land to the United States," said Dann. In her view, the Crescent Valley still rightfully belongs to the Western Shoshone, and it's the United States, not the Native Americans, who are doing the trespassing. The Indian Wars never really ended, she says.

The basis for Dann's argument hangs near a doorway leading to a back room in the trailer. Bound with a red ribbon, the document has a cover page written in calligraphic letters: the Treaty of Ruby Valley.

Signed in 1863 between the United States and the Western Shoshone, the Treaty of Ruby Valley was meant to end an undeclared war that began when thousands of whites arrived in present-day Nevada. As previously mentioned, the emigrant trains destroyed local food sources and indiscriminately killed indigenous peoples, initiating cyclones of violence across the desert. The endgame began in the early 1860s when a colonel named Patrick E. Connor set up a fort in the Ruby Valley. Charged with protecting the mail routes from periodic Shoshone raids, Connor ordered his California Volunteers to "destroy every male Indian whom you may encounter" and to "leave their bodies thus exposed as an example of what evildoers may expect." In January of 1863, Connor ambushed a Shoshone village along the Bear River in present-day Utah. His troops raped many and massacred approximately 250 Shoshone, among them approximately 80 women and children. The event became known as the Bear River Massacre. Later that year, at gunpoint, the Western Shoshone signed the Treaty of Ruby Valley.

Shoshone legend holds that the signing was a grisly affair. As Western Shoshone Council Chief Raymond Yowell tells it:

> They had [the Indians] lined up along that ridge, and the troops were standing there ready with their rifles. . . . They fed the Indians first, before signing the treaty. Before they did that they had the Indians turn over a supposedly bad Shoshone to them, who'd maybe killed some white people or something like that. And so they hung him in front of them first, that morning when they were going to sign the treaty. And then, after he was dead, they cut him down and took him away, and they [the Shoshone] didn't know what they did with him. His relatives wanted the body, but they wouldn't give it to them. Later on, they fed [the Shoshone] a meat that they couldn't recognize. Pretty soon, they figured out that they had cooked the Shoshone that they had hung and fed it to them.

It's not clear whether Yowell's story is historically accurate or not. More revealing is that the cannibal story is not entirely implausible. If settlers saw a wasteland on their way out west, the indigenous people saw—experienced—a storm of ultraviolence.

Whatever the circumstances under which the treaty was enacted, the Treaty of Ruby Valley's text declares "peace and friendship" between the United States and the Shoshone and outlines a working relationship toward the lands that the Western Shoshone call Newe Sogobia. In addition to granting the United States certain rights of passage and mining claims in Western Shoshone territory, the Western Shoshone are charged with ensuring that "hostilities and all depredations upon the emigrant trains, the mail and telegraph lines, and upon the citizens of the United States within their country shall cease."

But the Treaty of Ruby Valley was, and is, clear about one thing: The Western Shoshone retain sovereignty over their traditional land. At the time, this was perfectly reasonable: No one in the United States wanted the wasteland anyway. For the same reason, it was one of the few treaties that the United States never bothered to nullify. And, according to Carrie Dann and other traditional Western Shoshone, the treaty remains a singular legal

basis for the relationship between the indigenous nations and the United States. The United States, for its part, has not refuted Dann's argument, nor has it offered any documentation showing that the treaty of friendship between the two nations has been abrogated.

In September of 2002, the United States returned. Once again, Dann was being accused of trespassing; once again, Dann rejected the notion that it was possible for her to trespass on land she saw as rightfully belonging to her people. At four A.M. one Sunday, around forty-five armed federal agents, a helicopter, an airplane, and a fleet of ATVs descended on Pine Valley and other places where Dann's herd grazed. Mary Gibson, a Shoshone, was camping in one of the canyons with a group of eleven people, waiting for the raid after being warned to expect it. "We saw a convoy of twenty vehicles with flashing lights roaring up the valley," she recalled. "I could not help but think of how this is how our ancestors felt when they saw the cavalry coming. So many of my people were killed on this land and now it's happening again." The Feds rounded up Dann's cattle and loaded them into trucks to be sold at auction. The ranch was devastated.

As our conversation wound down, I asked Dann what would happen if somehow the Western Shoshone were put in charge of the territory they call Newe Sogobia. What would happen if, say tomorrow, the United States came out and said, "You're right, this land is yours—here it is." What would change?

"I think about that a lot," says Dann. "I couldn't give you an answer, but my personal opinion is that we're willing to sit down with anyone, with the Feds, or whomever. When you sit down and talk, you can work out pretty much any problem. The problem right now is that they're not even willing to sit at the same table with us. I'm sure that there are ways that things could be figured out for the best of everyone who's here."

Julie Fishel chimes in: "There are a couple of things that you

can be sure about. If the Shoshone won this tomorrow, there'd be no more testing at the nuclear test site, there'd be no nuclear waste at Yucca Mountain, and there'd be some kind of compensation for the things that are going on now in terms of mining. The Western Shoshone would start thinking about how to repair the land and figuring out how to clean this mess up."

"What's happening right now is a spiritual holocaust," says Carrie. "I don't know what they call it, but that's what's happening."

"When you allow this kind of corruption to fester in a government and you allow it to spread, it legitimizes everything," says Fishel. The United States starts to think, "We killed a bunch of people to get this land in the first place, and it worked then and we didn't get in trouble for it, so let's do it some more. Let's do it in Iraq, let's do it somewhere else, too."

For the collection of activists sitting in an unmarked trailer in the recesses of Nevada's vast valleys, the black world is much more than an array of sites connected to one another through black aircraft, encrypted communications, and classified careers. It is the power to create those geographies, to create places where anything can happen, and to do it with impunity.

Born in 1889, Herbert Yardley had an early life that compels writers to invoke the cliché "all-American boy." At his school in Worthington, Indiana, Yardley was class president, editor of the school paper, and captain of the football team. His friends called

him "a genius" and "the smartest boy in the country." As a teenager, he taught himself how to play poker by dealing hands to himself at home, memorizing the odds of different plays, and learning to fold when the cards were stacked against him. Yardley's father was a railway telegrapher, and Herbert mastered the skill as a youth. When Yardley left Indiana in 1912 to pursue a career as a code clerk and telegrapher at the State Department in Washington, D.C., his combination of skills would come together in the "Black Chamber"—the early prototype of what would become the Pentagon's black world.

As a telegrapher for the State Department, Yardley developed an interest in cryptology—the science of making and breaking codes—and taught himself the art using Captain Parker Hitt's *Manual for the Solution of Military Ciphers*. When work slowed or when he had spare time, Yardley tried to decipher the encrypted messages coming across his desk. After he shared his success, friends started bringing him encrypted diplomatic messages from foreign embassies. One slow night, a communication to President Wilson from Colonel House came over the wire, and Yardley made a copy. "This would be good material to work on," he reasoned, "for surely the President and his trusted agent would be using a difficult code." Yardley was shocked to realize that he was able to decipher the message in less than two hours.

Over the following year, Yardley devoted much of his time to completing a one-hundred-page analysis of the American cryptographic system, entitled *Solution of American Diplomatic Codes*, which he dutifully presented to his superiors at the State Department. When Yardley's State Department supervisor David Salmon began reading the young code-breaker's work, he was stunned. Salmon knew that the British employed a team of code-breakers specifically to decrypt diplomatic communications, and when he asked Yardley if he thought that the British were able to read American diplomatic communications as well, Yardley replied

with a quote that would become famous in intelligence circles: "I always assume that what is in the power of one man to do is in the power of another."

On April 6, 1917, Congress declared war on the German Empire after the sinking of the *Lusitania* and after the British gave President Wilson a copy of the Zimmerman Telegram that the Royal Navy cryptanalytic group had intercepted. In the telegram, the Germans proposed to Mexico that the two countries join forces to attack the United States and reclaim lands lost in the Mexican-American War.

Yardley saw an opportunity. After collecting letters of recommendation from his State Department supervisor and military officers whom he knew, Yardley approached the Army with the idea of establishing an American cryptanalysis unit. By midsummer, Yardley was the head of MI-8—military intelligence, section 8. In lieu of an office, Yardley received a few feet on a balcony in the Army's War College building and a desk. He was now in charge of the United States' first cryptologic agency. And so began a project that would one day evolve into the National Security Agency.

As the First World War pounded on, Yardley built up MI-8 to include the Code Compilation Subsection, to develop new and more secure code systems; the Communications Subsection, to provide secure communication with military and intelligence operatives overseas; the Shorthand Subsection, to concentrate on understanding foreign shorthand systems; the Secret Ink Subsection; and the Code and Cipher Solution Subsection, designed to decrypt and decipher foreign messages. By the end of the war, MI-8 employed 77 people, had deciphered 10,735 pieces of foreign communication, and had solved about 50 codes and ciphers from a handful of foreign governments.

With the end of World War I, Yardley assumed that he would be out of work and resigned himself to "getting some sort of job with the American Code Company." But there were stirrings of

keeping MI-8 around even though its original mission was now over—perhaps it would be useful to maintain such a powerful capacity. Yardley was asked to write a proposal to preserve MI-8 and convert its mission to peacetime purposes, which he readily did. A day later Yardley submitted his proposal, calling for a budget of $100,000 (roughly $1.3 million in today's dollars), $40,000 to be paid by the State Department and $60,000 by the War Department, and retaining a staff of about fifty people. The following day, May 17, 1919, Frank Polk, acting secretary of state, scribbled "OK" on Yardley's proposal. Yardley's Black Chamber—as his outfit would become known—was born.

The budget for Yardley's Black Chamber was probably the first instance of a secret intelligence budget in U.S. history. The War Department's share of the Black Chamber's budget was disguised under the line item "Contingency Military Intelligence Division, General Staff" and was submitted as a "confidential memorandum" not subject to the review of the comptroller general. This early form of the black budget manifested in the space of a four-story brownstone at 3 East Thirty-eighth Street in New York City, whose cover story was the Code Compilation Company.

For the next ten years, Yardley's Black Chamber cracked Japanese diplomatic codes, and supplied the State Department with a stream of messages that inevitably began with the words "We have learned from a source believed reliable that . . ."

The Radio Communication Act of 1912 guaranteed privacy in communications: The law made intercepting cable traffic illegal without a court order. In spite of this, Yardley made a personal visit to Newcomb Carlton, the president of Western Union. After the meeting, "President Carlton seemed anxious to do everything he could for us," said Yardley. This too became a precedent: black agencies operating outside the law.

Nonetheless, the Black Chamber began to wither away, the victim of budget cuts. By 1925, Yardley was compelled to bring his

operation down to a mere seven code-breakers. The final cut to the Black Chamber came with the incoming Hoover administration in 1929.

When Herbert Hoover took control of the White House and named Henry L. Stimson secretary of state, the existence of the Black Chamber remained secret even to the incoming administration. Yardley had asked his liaison at the State Department to remain quiet about the code-breaking operation, hoping not to draw undue attention to his project during the first few months of the government's transition. After a few months had passed, Yardley decided that Stimson had settled in well enough to be informed and provided the secretary of state with a handful of decrypted Japanese messages. Stimson didn't take the news of the Black Chamber as well as Yardley would have hoped. Outraged, he famously exclaimed, "Gentlemen do not read each other's mail," and sought to immediately shut down Yardley's operation. On October 31, 1929, the Black Chamber closed its doors for good. Or so it seemed. Just as the Black Chamber was shutting down, the Army tapped William Fredrick Friedman to continue its mission under the guise of a secret military unit.

Yardley's Black Chamber was not only the precursor to the National Security Agency, it was a fledgling prototype of what would swell into an enormous black world over the next sixty years. It employed specialized workers using a legitimate business as a cover; its budget—even its existence—was hidden from Congress; and it commanded a small infrastructure composed of innocuous rooms and buildings in New York, and a clandestine network of relationships to commercial cable companies and selected members of the State and War departments. The capacities the Black Chamber represented were revived on a tremendous scale during the next great war, and like the MI-8 group, whose existence remained in place even after its stated mission during World War I was over, the black projects of the Second World War

would remain in place at the end of that conflict as well. Ironically, fifteen years later, the same Henry Stimson who had closed the Black Chamber in a fit of indignation would be responsible for a nascent black project of almost infinitely larger proportions: the atomic bomb.