The Puzzle Palace: A Report on America’s Most Secret Agency by James Bamford

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BOOK REVIEWS

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James Bamford's recent book, The Puzzle Palace, fills what has been an enduring gap in the literature on the U.S. intelligence community. With the exception of an occasional chapter in a more general work, the National Security Agency (NSA), dubbed by Bamford the "Puzzle Palace," has never been the subject of a major study.

NSA is the technical agency charged with gathering signals intelligence (SIGINT), communications intelligence (COMINT) and electronics intelligence (ELINT), and information derived from the collection and processing of nonimagery infrared and coherent light signals. SIGINT: Signals Intelligence: comprises communications intelligence (COMINT), electronics intelligence (ELINT), foreign instrumentation signals intelligence (technical and intelligence information derived from the collection and processing of foreign telemetry, beaconry, and associated signals), and information derived from the collection and processing of nonimagery infrared and coherent light signals. COMINT: Communications Intelligence; the interception and processing of foreign communications.
gence (ELINT).5 Its functions include eavesdropping, codemaking and code-breaking. At its disposal is the most advanced computer and communications technology available. In *The Puzzle Palace*, Bamford is preoccupied with the ramifications of this technology on U.S. intelligence-gathering activities. He investigates whether the NSA has abused its extensive capabilities by focusing them on U.S. citizens; whether the NSA's extralegal status provides it with immunity where such abuses might have occurred; whether NSA operates to maximum effectiveness in its legitimate collection activities; and finally, whether NSA's counterintelligence procedures are adequate.

**HISTORY OF THE NSA**

According to Bamford the NSA's earliest American antecedent was the Black Chamber, formed during World War I to handle codebreaking responsibilities or cryptology. It was closed in 1929 by the new Secretary of State Henry L. Stimson, who announced that "gentlemen do not read each other's mail."6 Cryptology, however, had by that time come to be recognized as a necessary component of U.S. intelligence activities. For the next two decades, cryptologic activities were dispersed throughout various branches of the State Department. Although reorganized numerous times, it was not until 1952 that a final reorganization led to the creation of a single, centralized cryptological organization, the NSA.

Bamford's treatment of the history of American cryptology, while thorough, is not original. His account of the origins of the modern NSA closely parallels David Kahn's version in his classic work *The Codebreakers,*7 which traces the history of cryptology from the tomb of Khnumhotep II through the mid-1960's. Bamford does, however, expand on Kahn's account by including material from interviews he conducted with Mrs. Edna Yardley and Marie S. Klooz.8

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5. ELINT: Electronics Intelligence; the collection (observation and recording) and the processing for subsequent intelligence purposes of information derived from foreign, noncommunications, electromagnetic radiations emanating from other than atomic detonation or radioactive sources. National Security Council Intelligence Directive (NSCID) No. 6, *quoted in id.* at 438.

6. *Id.* at 17.


8. Mrs. Yardley was the wife of Herbert O. Yardley, head of MI-8, or the famous "Black Chamber," which broke the Japanese diplomatic code, leading to an American diplomatic victory at the Washington Conference (1921-1922). **BAMFORD, supra note 2, at 5-10.** Yardley authored the controversial book, *THE AMERICAN BLACK CHAMBER 1931* as well as *JAPANESE DIPLOMATIC SECRETS.* The latter, on which he collaborated with Marie Stuart Klooz, was never printed owing to governmental intervention. **BAMFORD, supra note 2, at 19-25.**
Bamford's real contribution lies in his gathering and assembling of information on the structure and activities of the modern NSA which, until now, has been almost impossible to obtain. In a chapter appropriately entitled "Anatomy," Bamford offers an exposé of the structure of the "largest single espionage factory the free world [has] ever known." He details the size and organization of the NSA's operational organizations, staff and support activities and devotes significant space to a description of NSA headquarters in Fort Meade, Maryland.

In searching for information on NSA's recent activities, Bamford has done an admirable job of sifting through the discursive records of the Senate Intelligence Committee's investigations, conducted during the mid-1970's, which revealed two alleged NSA abuses of power: Operations Shamrock and Minaret. He offers gripping accounts of the Israeli assault on the U.S.S. Liberty in 1967 and the 1968 seizure of the U.S.S. Pueblo, revealing the NSA's role in the operation of both ships. Bamford touches upon still other events in recent history, e.g., the Pentagon Papers and Koreagate, disclosing NSA's little-known though significant connection with each incident discussed.

**NSA Monitoring Stations Revealed**

Perhaps the most fascinating aspect of the book is Bamford's creative use of requests under the Freedom of Information Act (FOIA). Through this means...
he has revealed the location of NSA microwave intercept stations in Sugar Grove, Virginia and Yakima, Washington.

Here Bamford presents us with a vivid example in which the public's right—or perhaps "need"?—to know hangs in delicate balance with national security. Bamford posits that the reason for the choice of the Sugar Grove and Yakima locations is their close proximity to COMSAT earth stations in Etam, West Virginia and Brewster, Washington. He thus implies that NSA's intent is to monitor the communications of American citizens. Through the Etam station alone "passes more than half of the commercial, international satellite communications entering and leaving the United States each day."14 In view of Operations Shamrock and Minaret, both of which monitored American citizen's communications, Bamford's reasoning seems plausible.

On the other hand, "informed sources" have rejected Bamford's implication on two grounds. First, it is not the proximity of these stations to COMSAT earth stations that is their attraction, but rather the fact that "freedom from electronic interference enables them to pick up weak signals given off by Soviet satellites in deep space."15 Second, NSA simply does not have the resources to monitor the vast flow of communications passing through these stations.16

It has been suggested that NSA operations must remain secret to be effective. Philip Taubman, a Washington correspondent specializing in intelligence matters, asks: "What is the price of spelling out, as Mr. Bamford does, the exact location and capabilities of the NSA's worldwide listening posts? The trouble is that intelligence officials have too often used these kinds of legitimate concerns to shield questionable operations and to avoid public accountability."17 Similarly, Bamford argues that national security need not be damaged by informing the American public of NSA activities. He asserts that the Soviet Union has satellite photographic capabilities that would enable it to watch these stations being built.18

But the need for secrecy in national security operations should not be lightly brushed aside. In a telephone interview with William Colby, the former director of Central Intelligence posed the rhetorical question: "How many telecommunications installations do you think there are in the United States? Thousands!"19

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14. **Bamford, supra note 2, at 170.**
16. *Id.* Martin notes:
   The volume of domestic and international communications has roughly doubled annually during the past 10 years while the number of NSA employees has fallen by a third. And while computers can sort through intercepted cables at high speeds — even in code — 90 percent of the communications are by voice, and for that the NSA still needs a warm body wearing a set of headphones.

19. Telephone interview by the authors with William Colby (Oct. 20, 1982).
The Soviet Union does not have the resources to focus on all of them. Bamford has now alerted the Soviet Union to the intelligence-gathering nature of two of these stations and given their locations. From this information Soviet analysts can deduce the kind of intelligence being gathered and frustrate future NSA efforts.20

In Bamford’s defense two points can be made. First we turn to Allen Dulles who writes:

> The fact that intelligence is alert, that there is a possibility of forewarning, could itself constitute one of the most effective deterrents to a potential enemy’s appetite for attack. Therefore the fact that such a weapon of warning can be created should not be kept a secret but should be made well known, though the means and mechanics of warning should remain secret.21

Arguably, The Puzzle Palace makes this threat credible by establishing the existence of these vast resources. But, as the location of listening posts could be argued to constitute “a means,” the positive impact may be mitigated.

At another level, there is no provision in the Freedom of Information Act restricting foreign citizens from making use of the Act. In short, Tass could have made precisely the same inquiries which led Bamford to the discovery of these stations.22 Such overt intelligence methods are heavily relied on by the Soviet Union for information;23 the natural vulnerability of open societies is, of course, the free flow of information. It would, however, have taken an investment of Soviet resources, though perhaps not prohibitive, to achieve the same end.24

20. Allen Dulles, director of Central Intelligence during the Eisenhower Administration, recalls a very similar occurrence entailing the discovery of the positioning in Cuba of Soviet medium-range missiles in late October of 1962. “Here, too, was an interesting case in which classical collection methods brought extremely valuable results. Various agents and refugees from Cuba reported that something in the nature of missile bases was being constructed and pinpointed the area of construction; this led to the gathering of proof by aerial reconnaissance.” A. DULLES, THE CRAFT OF INTELLIGENCE 68 (1963) [hereinafter cited as DULLES].

21. Id. at 51 (emphasis supplied).

22. Senate Bill 1751, S. 1751, 97th Cong., 1st Sess. (1981), introduced before the Senate Judiciary Committee on October 20, 1981, was intended to restrict foreign citizens access to information released under the FOIA. A hearing was held on November 12, 1981 and the bill died in that Congress.

23. Dulles writes:

> In countries that are free, where the press is free and the publication of political and scientific information is not hampered by the government, the collection of overt intelligence is of particular value and is of direct use in the preparation of our intelligence estimates. Since we are that kind of country ourselves, we are subject to that kind of collection. The Soviets pick up some of their most valuable information about us from our publications, particularly from our technical and scientific journals, published transcripts of Congressional hearings and the like. 

DULLES, supra note 20, at 56.

24. Similarly, at what may be substantial risk to U.S. national security, Bamford exposes the close relations of the NSA and its British counterpart, the General Communications Headquarters (GCHQ). Justice Department documents Bamford obtained through FOIA requests “disclose that GCHQ intercepted and gave the U.S. government telex communications from American citizens who had been
Bamford's book has freed the Soviets to utilize these resources in the pursuit of other intelligence objectives.

**Big Brother?**

In an address at Berkeley, John F. Kennedy told his audience "In a time of turbulence and change, it is more true than ever that knowledge is power." Turbulence and change are the standard of the U.S. intelligence community, while knowledge is its stock in trade.

The greatest source of change in U.S. intelligence-gathering capabilities has been the impact of rapidly advancing technology. Two decades ago Allen Dulles wrote about those "special devices which have been developed to observe and record events, to replace in a sense the human hand and eye or to take over in areas which human capabilities cannot reach." Dulles listed the basic tools of technical collection as radar and accurate long-range photography. The U-2 of Dulles' days as director of the CIA has been superseded by the SR-71 Blackbird capable of achieving a speed of 2000 miles per hour and of photographing 100,000 square miles in less than an hour from a height of 85,000 feet. Computers of Dulles' era, with circuitry less advanced than that of contemporary children's electronic toys, is now being replaced by analog optical computing technology, light-sound interaction devices and charge-transfer devices capable of achieving more than one quadrillion multiplications per second.

Bamford proceeds from the premise that if we have the technology we will use it — against Americans as well as our enemies. He describes in detail the measures placed on a 'watch list' by the secret National Security Agency (NSA). There is evidence that the Reagan administration attempted to suppress publication of these findings. One might again ask Taubman's question: "At what cost this disclosure?" Bamford argues that it has long been public knowledge that there has been a close working relationship between GCHQ and NSA. Dulles underscored the point when he wrote:

One of the most gratifying features of recent work in intelligence, and one that is quite unique in its long history, has been the growing cooperation established between the American intelligence services and their counterparts throughout the Free World which make common cause with us as we face a common peril.

While the issue seems to be embarrassment over the fact that the GCHQ contributed to the illegal Minaret Operation, one might argue that fear of exposure may result in freezing the flow of information for which we have a legitimate need in the future. Former DCI William Colby, himself a graduate of British intelligence school during World War II, stated that "We don't talk about our relations with other services. Every government has different standards for what it will reveal to the public. They don't want us talking about their business." Telephone interview by the authors with William Colby (Oct. 20, 1982).

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27. Id. at 66.
29. Id. at 102.
30. His position is derivative of that of Senator Frank Church who opened hearings on the NSA by stating:
mammoth capabilities of the NSA to monitor, sort and analyze communications. He also notes that according to the yardsticks of budget and size, the NSA is the organization which clearly wields the most influence in the intelligence community — even more than the CIA.

Size and technical capabilities, however, are not themselves credible measures of power within the U.S. intelligence community. True influence lies with the policymakers. NSA, a strictly technical agency, does not itself determine targeting priorities. Target requirements are defined by COMINT consumers which include the CIA, FBI, State Department and the intelligence units of the Army, Navy, and Air Force. NSA merely implements priorities established by other intelligence agencies. Bamford might, therefore, be accused of "barking up the wrong tree." As Senator Tower testified before the Senate Intelligence Committee:

Even if the risks [to our national security] were minimal — and I do not believe they are minimal — the NSA is the wrong target [for investigation]. The real quarry is not [sic] largely mechanical response of military organizations to orders. The real issues of who told them to take actions now alleged to be questionable should be addressed to the policy level. It is more important to know why names were placed on a watch list than to know what the NSA did after being ordered to do so.

NSA did, nonetheless, carry out orders that were clearly illegal. Is it possible NSA operations could take on Orwellian dimensions? For a number of reasons this seems unlikely. Though the protection it provides should not be overstated, it is an often forgotten fact that the NSA is composed of Americans who themselves have an interest in protecting the civil liberties from which they too benefit.

Moreover, the NSA is subject to the scrutiny of the Department of Justice and various Congressional oversight committees. Attorney General Elliot Richardson, upon discovering the existence of Minaret, demanded a halt to that operation. In a chain reaction, this led in turn to the cessation of Shamrock activities. In a chapter entitled "Fissures," Bamford himself discusses at length the inquiries

We have a particular obligation to examine the NSA, in light of its tremendous potential for abuse. It has the capacity to monitor the private communications of American citizens without the use of a "bug" or "tap." The interception of international communications signals sent through the air is the job of NSA; and, thanks to modern technological developments, it does its job very well. The danger lies in the ability of the NSA to turn its awesome technology against domestic communications.

The National Security Agency and Fourth Amendment Rights: Hearings before the Senate Select Committee to Study Governmental Operations with Respect to Intelligence Activities, 94th Cong., 1st Sess. 2-3 (1975) [hereinafter cited as Intelligence Activities Hearings].

31. See Bamford, supra note 2, at 49-55.
33. Bamford, supra note 2, at 294. For a discussion of Minaret, see note 12 supra.
34. Bamford, supra note 2, at 236. For a discussion of Shamrock, see note 12 supra.
35. Bamford, supra note 2, at 280-308.
of the Senate Intelligence committee and the House Government Information Subcommittee. The findings of these committees provided the source material for much of his book.

Finally, the Orwellian scenario assumes unlimited financial resources. As is the case with every federal agency, the NSA is subject to the budgetary constraints imposed by the Office of Management and Budget and Congressional appropriations procedures. The NSA therefore must face all the distributional difficulties entailed by the finite resources that plague her sister agencies.

**NSA's Legal Status**

Bamford makes several well-taken points, however, on the extralegal status of the NSA.\(^{36}\) Despite the Senate Intelligence Committee's recommendation that the situation be rectified, NSA, which was created by an executive decree, National Security Council Intelligence Directive Number 6 (NSCID 6), began without a legislative charter and continues to exist without one. Bamford builds a *prima facie* case that externally imposed legal constraints such as the Foreign Intelligence Surveillance Act (FISA) established in lieu of a charter are insufficient.\(^{37}\)

FISA, signed into law by President Carter in 1978, establishes the Foreign Intelligence Surveillance Court.\(^{38}\) This court issues warrants enabling agencies, among them the NSA, to use electronic eavesdropping technology within the United States against foreign embassies, diplomats and agents of foreign powers. "In the court's first fifteen months, ending in December 1980, it approved all 518 applications, including one order that granted even broader authority than that

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36. In October, 1975, the Senate Intelligence Committee held hearings on the NSA. Bamford relates how, in their testimony, "The top three officials of the Agency [Allen, Banner and Buffham] all agreed that NSA exists somewhere in an extralegal limbo, unrestrained by the same laws and statutes that govern the rest of the nation. . . ." *Id.* at 301.

37. Three decades after its creation, the NSA is still without a formal, statutory charter, the first reform called for by the Church Committee. Instead, there is a super hush-hush surveillance court that is virtually impotent; the FISA, which has enough loopholes and exceptions to render it nearly useless; and an executive order that was designed more to protect the intelligence community from the citizens than citizens from the agencies. In addition, because it is an executive order, it can be changed any time at the whim of a President, without so much as a nod toward Congress.

*Id.* at 378.

NSCID No. 6 gives the NSA the right to ignore legal restraints placed on the rest of government. "Orders, directives, policies, or recommendations of any authority of the Executive branch relating to the collection . . . of intelligence shall not be applicable to Communications Intelligence activities, unless specifically so stated. . . ." NSCID No. 6, *quoted in id.* at 46. So, despite the fact that the Justice Department determined that the NSA had violated the Communications Act of 1934 in the course of Operation Shamrock, it was forced to conclude that it was not subject to the provisions of that Act (or any other Act). *Id.* at 307.

For a discussion of the NSA's immunity from the provisions of the Freedom of Information Act, see note 13 supra.

sought by the Justice Department.\textsuperscript{39} Since that time, only one application has been denied. William Colby argues that this cannot be construed as evidence incriminating the court;\textsuperscript{40} it merely demonstrates that the government is being careful about the cases it brings before the surveillance court. It is difficult to imagine that, however careful the government may be, it could establish 518 flawless cases. It seems that the record of the Foreign Intelligence Surveillance Court merits closer scrutiny.

\textbf{NSA Efficiency}

Although Bamford does not explore the question of the efficiency of NSA's intelligence-gathering at length, he does raise several pertinent questions, among them the coordination of targeting, the emphasis on Soviet vs. Third World targets, and NSA counter-intelligence procedures.

NSA listening posts pick up indiscriminately all microwave signals passing within their listening range (this has been called the "vacuum cleaner approach"). Massive computers then sift through raw communications looking for certain targeted words or phrases. The crucial step in the process is the decision as to which intelligence needs shall be targeted.\textsuperscript{41}

The various COMINT consumers — the CIA, FBI, State Department and the military intelligence units — all compete to have their intelligence needs met. In order to incorporate as many of their needs as possible very broad target items are chosen, often at the expense of narrower but more crucial items. "The most dramatic evidence of these weaknesses was the failure of COMINT to warn of the Korean invasion."\textsuperscript{42} This problem continues to be a major concern to U.S. security.

Another major problem relating to NSA efficiency is the focus of NSA technical resources on surveillance of the Soviet Union at the expense of the Third World.\textsuperscript{43} William Colby argues that this concentration of effort is justified since the Soviet Union constitutes the gravest threat to U.S. security extant and is difficult to penetrate except by the most sophisticated means.\textsuperscript{44}

This explanation seems inadequate, however, in view of the fact that the post-war world's hot-spots have invariably cropped up in the Third World, the

\textsuperscript{39} B\textsc{amford}, \textit{supra} note 2, at 370.
\textsuperscript{40} Telephone interview by the authors with William Colby (Oct. 20, 1982).
\textsuperscript{41} Targeting is the process of turning intelligence requirements into specific data collection line items. For example, if the Army is interested in finding out about drug use by East German soldiers, it makes that request to the NSA. The NSA analyst decides what German words or phrases might be used in conversations involving drugs and East German soldiers. The NSA computers then look for the use of these words while sifting through communications collected by the NSA. Interview with James Bamford, \textit{published in 7 FLETCHER FORUM 205} (1983).
\textsuperscript{42} B\textsc{amford}, \textit{supra} note 2, at 49.
\textsuperscript{43} \textit{Id}. at 212.
\textsuperscript{44} Telephone interview by the authors with William Colby (Oct. 20, 1982).
most recent examples of course being the Falkland Islands and Lebanon. The more convincing argument has been made that intelligence-gathering in Third World countries can often be conducted more cost-effectively by other means since they are much less difficult to penetrate.45 One must therefore survey the coverage of the Third World by the entire intelligence community in order to determine whether there is a need for the use of highly sophisticated NSA capabilities or whether other less sophisticated means such as human intelligence would be sufficient.46

The last issue of efficiency which Bamford discusses at length is the inadequacy of NSA's own counterintelligence procedures. The fact that this issue arises with regard to the NSA is ironic when one considers that at one time its very name was classified information.47 Yet, in a lengthy chapter entitled "Penetration," Bamford describes the inadequate security of NSA facilities at Fort Meade:48 "Once on base, anyone from the Soviet ambassador to Yassir Arafat can walk up the dozen or so steps and in the reception area, no questions asked, take a seat, and begin listening to some very interesting conversations."49

Bamford details the inadequate personnel screening practices which led to the double defection to Moscow of two agency employees in 1960 and other acts of treason on the part of NSA personnel. Bamford concludes that the NSA "managed the distinction of becoming not only the most secretive and most hidden member of America's growing intelligence consortium, but also the most thoroughly penetrated."50 While his statement may perhaps be overdrawn, the allegation should not be passed over lightly.

SEARCHING OUT THE MARGIN

The strength of Bamford's work lies in the broad and well-documented body of information he has gathered for and for the first time made available for general public consumption. The Puzzle Palace does not, however, explicitly state

45. Martin writes that "the Soviets manage to mask as much as 75 percent of their communications spectrum — and the remaining 25 percent is available to the NSA only because the Soviets don't think it's worth the time and money to protect it." Martin, supra note 15, at 28.

46. See, e.g., Bamford, supra note 2, at 346. Bamford writes: "Of equal or greater importance was diplomatic and military intelligence plucked from the Third World. Encrypted, for the most part, on antique, inexpensive, or unsophisticated machines, most communications from Africa, South America, and Asia were easy pickings for the NSA." Id.

47. Id. at 2.

48. Id. at 118-54.

49. Id. at 123. Bamford continues:

Actual examples include several members of Britain's untrasecret GCHQ comparing security at NSA with that "in the Cotswolds" while waiting for their security badges to be issued, a member of Canada's equally secret Communications Branch of the National Research Council (the Canadian Puzzle Palace) swapping stories with his NSA sponsor, and an assortment of COMSEC [communications security] contractors speaking over the internal telephones.

Id.

50. Id. at 154.
its assumptions or provide adequate analysis of the issues it raises. For instance, Bamford has assumed that if NSA is in possession of powerful technology it will be used toward achieving illegitimate ends. He does not, however, provide an adequate defense of his position. Indeed, the evidence he offers, Operations Shamrock and Minaret, could equally be used to reaffirm the validity of the American system of checks and balances.

Bamford also mistakes sheer mass for power. While acknowledging that the NSA is strictly a technical body, he fails to recognize that ultimate authority lies with the policymaker who determines the type of information to be collected. Senator Tower charged the Senate Intelligence Committee with falling prey to:

> our own fascination with the technological advances of the computer age. We have invited a three star military officer to come before us to explain the awesome technology and the potential abuses of a huge vacuum cleaner. We have done this despite the fact that our exhaustive investigation has established only two major abuses [Shamrock and Minaret] in 23 years, both of which have been terminated.51

Bamford has seemingly fallen into a similar analytical trap.

Underlying Bamford’s discussion of the inefficiency of NSA intelligence and counterintelligence operations is the premise that intelligence activities are necessary to our national security and therefore legitimate. Yet, he nowhere defines the appropriate role of the intelligence community or its limitations. Bamford does not address the potential risks to national security implicit in revealing the internal operations of the NSA. Nor does he build a strong case for the public’s need to know the information contained in *The Puzzle Palace*.

Perhaps the most prominent analytical gap is Bamford’s failure to establish what is, in his view, an appropriate standard of secrecy. Bamford himself recognizes the need for counterintelligence, *i.e.*, the safeguarding of one’s own secrets and institutions from penetration by the “enemy.” This implies a curb on civil liberties. How then does one draw the line between purely domestic matters and international concerns?

There is a margin at which an additional unit of national security will incur a cost in civil liberties (and vice versa) which Americans are unprepared to pay. Clearly, to perform the implied cost-benefit analysis would entail the impossible task of quantifying intangibles. Difficult as this may be, the need to search out and define this margin is not obviated. It is a task Bamford has left undone.

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