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TINKER WITH GADGETS, TAILOR THE FACTS

The spy as techno-bureaucrat
By Andrew Cockburn

Among the books discussed in this essay:

- The United States Intelligence Community*, by Jeffrey Richelson. 384 pages. Ballinger Publishing. \$39.95.
- The Puzzle Palace: A Report on America's Most Secret Agency*, by James Bamford. 465 pages. Houghton Mifflin. \$16.95.
- Secret Contenders: The Myth of Cold War Counterintelligence*, by Melvin Beck. 158 pages. Sheridan Square Publications. \$14.95.
- Warriors of the Night: Spies, Soldiers and American Intelligence*, by Ernest Volkman. 443 pages. William Morrow. \$17.95.
- MI6: British Secret Intelligence Service Operations 1909-1945*, by Nigel West. 266 pages. Random House. \$16.95.
- Enigma: How the German Machine Cipher Was Broken, and How It Was Read by the Allies in World War II*, by Waldyslaw Kozaczuk. 368 pages. University Publications of America. \$24.
- British Intelligence in the Second World War*, edited by F. H. Hinsley. 3 vols., 2, 120 pages. Cambridge University Press. \$126.50.
- Deadly Deceits: My 25 Years in the CIA*, by Ralph W. McGehee. 250 pages. Sheridan Square Publications. \$14.95.

One of the problems of secret intelligence these days may be that it has only half gone public. Consider last fall's curious episode of the shipload of MIG fighter planes that wasn't. Briefly, a Soviet cargo ship freighted with MIGs packed in crates was widely reported, in the form of high-level leaks from the Pentagon and the State Department, to be nearing the coast of Nicaragua. How had this alarming situation been discovered? U.S. "intelligence analysts" poring over satellite photographs had detected crates, of a type previously used for transporting MIGs, piled on the dock in the Black Sea port of Nikolayev near where the aforementioned cargo ship had been moored. Clouds over the port prevented the analysts from actually watching the crates being loaded onto the ship. But when the weather cleared, both crates and ship were gone. Ergo, the MIGs were on the ship.

By the time this process of reasoning and de-

duction had been carefully explained in the newspapers and on television the American public knew a lot about the significance of packing crates and clouds—and a lot about circumstantial evidence. Yet curiously, the Reagan Administration and the intelligence agencies failed to take the matter to its logical conclusion. Having gone so far, why did they not throw the whole intelligence-gathering process open to the public? The evening news could have displayed not only the original satellite pictures of the crates at dockside but also the relevant pages of the "P. I. Key" (photo interpretation key), a standard tool for this kind of analysis. It is a catalogue of illustrations showing what a crated MIG or an intercontinental missile or whatever is likely to look like in a satellite photograph. Viewers could have been treated to a briefing on the relative effect on a ship's waterline of a cargo of planes, helicopters, or tractors. Perhaps anchormen could have told those interested where to mail away for defense attaché reports and significant articles in the Soviet or Nicaraguan press, the perusal of which would

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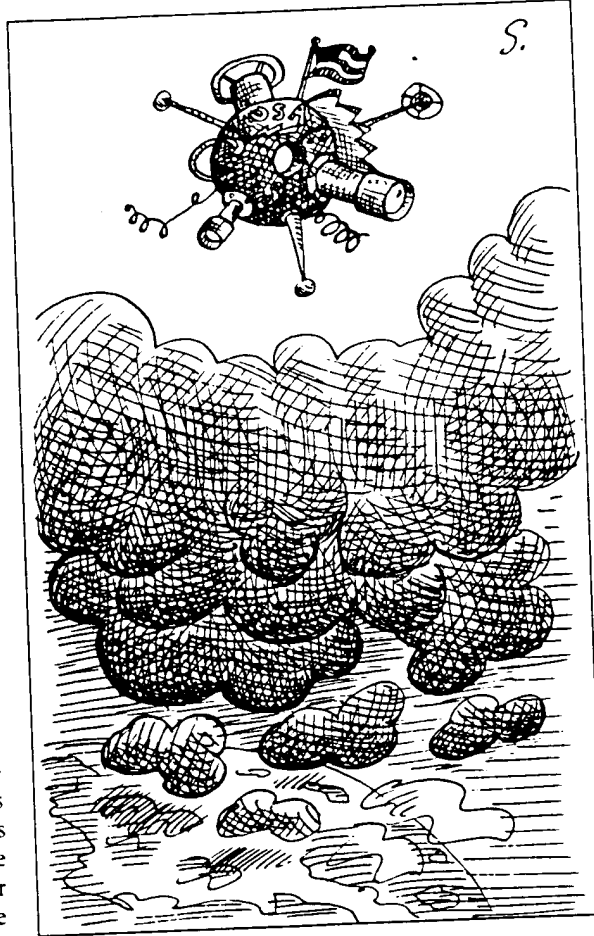
have allowed do-it-yourselfers to conduct their own analysis. Since most people are endowed with the normal human ability to make things up, they are as well equipped as any intelligence officer to invent the necessary facts and thus provide the Administration with what it wants.

As a matter of fact, the format for this kind of exercise in participatory democracy is already well established. The nightly intelligence round-up could segue directly from the weather report: "... however that cold front moving down from Canada that you can see on our satellite picture may make for a chilly weekend. You can also see on the satellite picture a rather impressive buildup of Soviet armor near the West German border. A sample selection of decrypted radio traffic on the Warsaw Pact command-and-control channels indicates that this is no ordinary exercise. So the outlook for Saturday and Sunday is an 85 percent chance of war. Now back to Chuck and Bob."

Considering the very, very large sums of money currently being expended by the Administration on various U.S. intelligence activities (realistic guesses hover around the \$20 billion a year mark), allowing the public to participate in the process might be an easy way of giving it some value for its tax dollars. While the exact sum is likely to remain secret (it is entirely possible that no one, in or out of government, knows precisely how much is involved), the sheer size of the machine that has to be fed indicates that the amount is huge. It is not, after all, just a question of the Central Intelligence Agency. The "community," as it cozily terms itself, also includes the National Security Agency; the National Reconnaissance Office; the Defense Mapping Agency; the Air Force, Navy, Army, and Marine intelligence organizations; the State Department's Intelligence and Research Bureau; the FBI; the intelligence divi-

sions of the Departments of Commerce, Agriculture, and the Treasury; the Drug Enforcement Administration; and the Federal Research Division of the Library of Congress.

Jeffrey Richelson, a professional student of intelligence organizations, makes a practice of correlating information from public sources, such as *Aviation Week & Space Technology*, and deducing therefrom conclusions that the authorities would prefer to keep secret. *The United States Intelligence Community*, a painstaking and fascinating portrait, details complexity past calculation. For example, those working for the Defense Meteorological Satellite Program, which falls within the purview of the First Space Wing of the Air Force Space Command, spend much of their time telling the National Reconnaissance Office (NRO), which operates all U.S. photo satellites, when places of interest like Moscow or Odessa are obscured by clouds and thus not worth the attentions of the NRO's space-borne cameras. Meanwhile, the First Space Wing's Space Defense Operations Center, better known as SPADOC, includes among its responsibilities the monitoring of enemy satellite activities. This monitoring is done so that



SPADOC might better issue fast and accurate SATRANs (Satellite Reconnaissance Advance Notices), warnings to those who have something to hide that a Soviet satellite is due overhead. Elsewhere in the community's acronym galaxy the FOSICs (Fleet Ocean Surveillance Information Centers) of the U.S. Navy gather information from satellites, ships, land stations, aircraft, and underwater sensors in order to produce CASPERs (Contact Area Summary Position Reports) on shipping around the world; when FOSICs aren't busy with CASPERs, there remain to be done DEPLOCs (Daily Estimated Position Locators) on ships both at sea and in port.

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Satellites not only take ordinary photographs. They also take infrared pictures, which depict objects by means of the heat they emit. Infrared pictures can easily be taken at night. Information can also be gathered after dark by using "image intensification," which works much the same way a night scope does on a sniper's rifle. Moreover, it is possible to "see" objects on the ground by using radar. All this being so, it may seem strange that simple everyday clouds were able to prevent Our Side from seeing what happened to those crates on the dockside. The problem is that infrared cameras can see through clouds only slightly better than the human eye. One might think that radar satellites are the answer. Unfortunately, pictures taken through clouds by radar are hopelessly fuzzy. Without getting too technical, the shorter the wavelength of the radar used to scan a target territory, the better the pictures. But radar can see through clouds only if the wavelength employed is substantially bigger than a raindrop—which results in a picture too fuzzy to be useful.

While a great deal of intelligence gathering involves *looking* at things, even more effort is devoted to *listening* to things (people, mostly). Thus we have SIGINT satellites for picking up signals intelligence, which may consist of the godless Bolsheviki communicating with each other (COMINT) or else simply emitting electronic signals of one kind or another (ELINT). ELINT shelters under its wing a whole brood of subcategories, including RADINT, monitoring enemy radars, and—this is a hard one to guess at—FISINT, which stands for Foreign Instrumentation Signals Intelligence and means picking up statements uttered by other people's machines.

Back on the ground, the National Security Agency, which is responsible for SIGINT, feels it incumbent upon itself to intercept all telephone calls transmitted on microwave radio circuits, which means practically all international calls. Happily, the agency has so far failed to develop a computer that can follow normal human speech in a reliable fashion, so it continues to rely on plain old-fashioned human operatives to listen to tapes of your telephone calls in the hopes of picking up indicators of subversion or espionage like "Lenin" or "Ed Meese." James Bamford, in *The Puzzle Palace*, makes the agency sound so unpleasantly nosy that it has been nice to observe the frightful tizzy into which its officials were thrown by his book. Admiral Bobby Inman, NSA director during the period of Bamford's researches, actually wrote to accuse him of "holding the NSA [annual budget: \$10 billion plus] hostage," and when Bamford went

on Larry King's radio call-in show in Washington, the agency went so far as to tape and transcribe the entire program.

Using the NSA's resources to listen in on a late-night talk show is hardly more futile than the kind of operations recalled by Melvin Beck in his splendid little memoir, *Secret Contenders*. There was the time, for example, when the CIA station chief in Mexico City succeeded in bugging the apartment of the top KGB operative in all of Mexico (who of course operated under diplomatic cover from the Soviet Embassy). How many pages of convoluted musings might such a counterintelligence triumph provide John le Carré? But reality proved more prosaic, according to Beck:

What was the grade, value or level of the intelligence we collected? I blush to put the question now, because at the time it hadn't occurred to me to raise it. . . . We had an exact tally on the love life of the Colonel, toilet training Soviet style, shopping lists and supermarket prices, husband-wife spats and all the trivia of folksy apartment living. When the Colonel and his wife had visitors, there was reams of small talk to plough through. But the secrets of running the KGB intelligence effort in Mexico remained locked up in the head of the Colonel.

As should be clear by now, machines play a dominant role in the collection of intelligence. The NSA counts its computers by the acre and burns forty tons of classified waste paper a week (unlike the U.S. Embassy in Tehran, which *shredded* its secret documents as the mob beat on the doors; the resulting confetti has been reconstructed into, so far, thirty volumes detailing the bureaucratic operations of the "nest of spies"). The National Reconnaissance Office produces more photographs than anyone could ever look at. The human/machine interface, as one might say in this sort of context, breaks down in other ways as well. Ernest Volkman, in *Warriors of the Night*, a lively *tour d'horizon* of U.S. intelligence, tells the story of a handbag-sized electronic listening device planted by CIA agents in a forest near Moscow. The bug was capable of picking up Soviet microwave transmissions and broadcasting them to an orbiting satellite. The device was concealed in a fake pine tree stump. This stump was then deposited by the apparently arboreally ignorant agents in a grove of aspens—which sadly (for the CIA) excited the suspicious attention of Muscovite tree fanciers out for a walk in the woods.

Whether doomed to such SNAFUs or not, a system that relies on machines of ever greater complexity is bound to engender grim pyramids of bureaucracy. Richelson chronicles the luxuriant proliferation of interagency committees like COMIREX (Committee on Imagery Re-

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quirements and Exploitation), which was born of COMOR (Committee on Overhead Reconnaissance) and which adjudicates on the thorny question of which among the different agencies gets to use satellites when and for what purpose. The organizational complexity of the intelligence community is so dense these days that fledgling CIA analysts spend much of their early careers being taught how to navigate the maze of agencies and committees, or, to put it another way, how to be bureaucrats.

Vastly expensive, dominated by machines that demand the services of armies of managers and accountants, geared, as Melvin Beck aptly observes, to conducting "operations for operations' sake," modern intelligence has come to resemble modern medicine. It is hard to say exactly how this came about, but it probably began on the very day the Truman Administration decided to institutionalize and fund a huge peacetime intelligence organization on the altogether spurious grounds that it was vital to U.S. security. The fact that the United States had become the dominant world power was certainly no justification for the move. Despite an assiduously maintained myth to the contrary, Britain got along quite nicely without an intelligence community for most of the time it was Top Nation. As Nigel West informs us in *M16*, his study of British intelligence in the years before World War II, the British Secret Service was not created until 1909, or long after the empire had been established and secured. But back to the medical analogy: the medical-industrial complex promotes itself by giving away artificial hearts while infant mortality rates in the ghettos continue to be high; the intelligence-industrial complex advertises its surveillance satellites as being able to read license plates from outer space, but has to learn about the death of Yuri Andropov from the Moscow correspondent of the *Washington Post*. In both areas of endeavor the ends, be they a healthy populace or well-informed policymakers, exist only to justify the costly and bureaucrat-intensive means.

It is therefore a huge relief to read about the dawn of machine intelligence and be brought back to a simpler era. In *Enigma*, Waldyslaw Kozaczuk tells the story of the tiny group of Polish mathematicians who broke Enigma, the machine for enciphering communications that was developed by the Germans before and during World War II. Marian Rejewski, Jerzy Rozycycki, and Henryk Zygalski were recruited to work on codes and ciphers by the Polish General Staff because they were exceptionally brilliant mathematicians. Not only did they discover a method for reading Enigma (at a time

when British cryptanalysts had given up the task as hopeless); they also devised what amounted to a primitive computer, which helped with some of the necessary calculations. (They christened their machine "the bombe" after a particularly delicious chocolate pudding they happened to be consuming in a Warsaw restaurant when they had the idea.)

The codebreakers supplied perfect intelligence about the disposition of the German invaders to the Polish high command—and to absolutely no effect. They then escaped via Rumania to France. After the fall of France in June 1940, they embarked on one of the most extraordinary operations in the history of intelligence gathering. The Polish codebreakers, together with a group of exiled Spanish Republican cryptanalysts, were put to work by the Resistance in a lonely chateau dubbed CADIX near Nîmes. There they calmly intercepted and deciphered the secret messages of the German forces.

Naturally, they could not litter the countryside with large antennae for intercepting radio transmissions. So Colonel Gustave Bertrand, a French intelligence officer and the Poles' protector, arranged for the collaborationist Vichy government's listening posts to intercept German transmissions and pass them on to the chateau. In addition, the Poles strung aërials from the chateau's roof.

Thus equipped, they were able to pick up high-level German communications from as far to the east as Russia and from Rommel's forces in distant Libya. As the estimable Colonel Bertrand later pointed out, the success of the operation demonstrated that "even with limited resources, given a team of determined people, in this field one can attain such goals as one wishes to set oneself"—a statement which would certainly sound foreign to the denizens of today's intelligence palaces sprawled around Washington, D.C.

The cryptological cottage industry went out of business when the Germans occupied Vichy France in November 1942. The Poles fled just ahead of the *Wehrmacht* and made their way, via an interment in a Spanish jail, to England. But when they finally arrived there, in July 1943, no one wanted to be reminded that these nondescript refugees had originally provided the key to the otherwise impenetrable German ciphers. Just before the war broke out in 1939, the Polish government had given the secret of the bombe to the British. It was Poland's contribution to the alliance, passed on in the hope of winning favor with more powerful partners. The British radio intelligence operation had by 1943 become a big business centered on Bletchley Park, outside London, where thousands of

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men and women decrypted and translated German signals. Vital to the effort were hundreds of bombes, although the female naval personnel who tended them had no idea from where the name had come. The month before the Poles landed, the panjandrums of Bletchley Park had seen off a high-ranking U.S. military intelligence delegation, which had been tremendously impressed by what it was given to believe was an exclusively British achievement.

Bletchley Park, with its access to the German machine ciphers, was vital to the British war effort. Its information gathering was of course crucial in fighting the Germans. But it was also a major contribution to the alliance with the Americans—one that could be set against the undeniable fact that by 1943 the United States was supplying most of the men, weapons, and money for the war with Germany. Thus the role of the Poles in making Bletchley Park possible was something better not discussed. This is made mournfully clear in the dense volumes of the official history of British intelligence in World War II edited by F. H. Hinsley (himself an alumnus of Bletchley Park). Hinsley is decidedly sniffy about the Poles' contribution to the breaking of Enigma, suggesting that their help was purely marginal: "the British bombe was of quite different design from the Polish and much more powerful."

The Poles were consigned to an intelligence unit attached to the Polish exile army, and were not allowed to work on Enigma. After the war, Rejewski returned to Poland and lived in reasonably comfortable obscurity until he died in 1980. Rozycki died during the war, while Zygański stayed in England and worked as a lecturer at Battersea College until his death in 1980. They had been victims of the fact that, since intelligence imparts the power to define reality for other people, states will guard their right to

exclusive possession of that power very jealously indeed.

Despite his relative reticence on the subject of the Poles, Hinsley offers a great deal of fascinating material about the operation of the first industrial-scale machine intelligence system—a system which, like its bloated successors in the United States today, depended on the enemy's use of machines on which its own machines could eavesdrop. Volume 3, for example, recounts the instructive story of what happened to British intelligence gathering on the German



antibomber defenses once the Germans stopped using radar to detect the British bombers. Radar, which is essentially a radio transmitter that waits for an echo of its signal off a target, can be located and identified. By the end of 1943, however, the Germans were tracking the British bombers simply by listening for all the electronic noise coming from the planes' own navigational and defensive radars. Since the British had nothing to listen in on—you can't listen for a radio receiver—they had no idea how the Germans were shooting their bomber squadrons out of the night skies. The British were naturally reluctant to accept that

all their elaborate antiradar devices were not only useless but actively dangerous, since they acted as beacons to attract the Germans.

Ernest Volkman touches on the same phenomenon when he discusses the less than comprehensive intelligence on the Iran-Iraq war being garnered by the United States. He reports in his book that the Iranians have been foiling the best efforts of American electronic espionage by sending sensitive military communications by hand. The United States faces similar problems in El Salvador, where the guerrillas no longer transmit much useful information by radio.

The many and obvious failings of sophisti-

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cated machine intelligence systems are bound to generate nostalgia for the certitudes of old-fashioned spying. Volkman makes this his bottom line, concluding his book with a good deal of harrumphing about the need for HUMINT, that is, Human Intelligence. There would seem to be good sense in this, especially when one contemplates the ever expanding technofantasies of the community's bureaucrats. The trouble is that HUMINT has just as great a potential for SNAFUs—albeit less costly ones—as the various technical means of gathering intelligence.

Moreover, developing the sort of spies who will tell you something interesting—or merely recruiting ones who are not in fact working for the other side—is easier urged than done. In *Deadly Deceits*, Ralph W. McGehee recounts how thousands of CIA man-years went into recruiting one Chinese Communist official, all with total lack of success. It may be that the CIA has been slightly more successful at recruiting spies in the Soviet Union in recent years, but Oleg Penkovsky, by common agreement the most useful agent the CIA ever possessed, was repeatedly rejected when he first offered his services and got in only on the strong recommendation of the more perspicacious (or hard-up) British.

And yet this thought lingers: perhaps the community has no desire to find good spies—or even to monitor fine-tuned machines. The plain truth of the matter is that HUMINT and COMINT and ELINT and all the rest are really only elaborate covers for the most important source of all: IMAGININT. Though the role of “creativity” may be carefully obscured by the agencies, information about its operation does occasionally leak out. In September 1982, for example, the House Intelligence Committee published a report on U.S. intelligence activities in Central America. The report discusses a “major intelligence briefing based primarily on an analysis of sensitive intelligence” that was delivered to the committee in March 1982. One of the forty-seven “viewgraphs” contained in the briefing, titled “Guerrilla Financing (Non-Arms),” suggested that the Salvadoran guerrillas were receiving money in addition to weapons, showing a total of some \$17 million annually. The report explains how the “\$17 million” figure was arrived at:

This resulted from an extrapolation which, as outlined by the briefer, seemed particularly tenuous. It was based on a single piece of evidence indicating the monthly budget [for the Salvadoran guerrilla] commander on one front. The extrapolation would have required that figure to be representative of the budgets of the other four factions, and all five factions to be equally active on each of the five fronts.

In a question for the record, the Committee asked about these assumptions. In its response, the intelligence community said it was unable to comment on whether the original monthly figure was representative, and instead explained that the bottom line of \$17 million which appeared on the briefing slide was “not an estimate” but was intended only to indicate that “relatively large sums of currency” were going to the guerrillas.

Experienced observers can spot traces of IMAGININT all through the official news these days, especially the news on Central America. Former CIA analyst David MacMichael has revealed that IMAGININT is the only source of intelligence on what President Reagan has decreed to be the “flood of arms” from Nicaragua to El Salvador. John Horton, the CIA’s National Intelligence Officer for Latin America, resigned last year after being called on the carpet for his dereliction in not consulting IMAGININT while working on an important paper. The lack of IMAGININT input made it impossible for him to realize that Mexico was then on the verge of revolution.

All this is not to say that intelligence agencies behave in this manner as a result of an immutable law of nature. In the wise words of Colonel Bertrand, “A team of determined people”—preferably small—can actually make the truth official. This was indeed the case with sections of U.S. intelligence during World War II. But such determined teams are hard to find these days.

It has long been a truism of intelligence analysis that the information jigsaw can be put together only by using all sources. Estimates of the movements of the Soviet leadership, for example, can be based both on a supersecret program to intercept their car-telephone conversations and on their appearances in *Pravda*. It is also a truism, or at least it should be, that the most inspirational source for an intelligence agency these days is the one that tells it which way the political wind blows. Which brings us back to our weatherman. ■