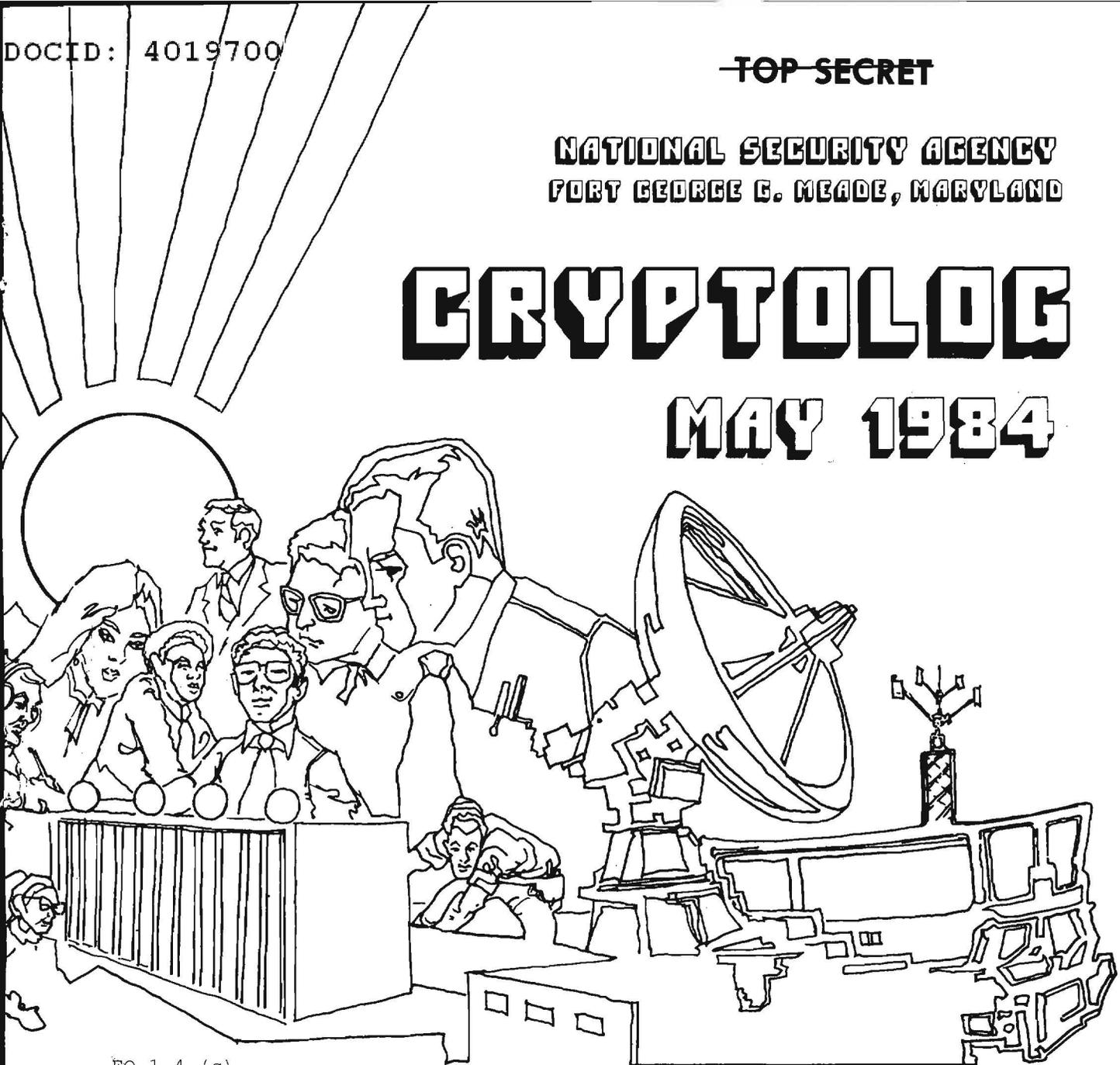


~~TOP SECRET~~

NATIONAL SECURITY AGENCY
FORT GEORGE G. MEADE, MARYLAND

CRYPTOLOG

MAY 1984



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P.L. 86-36

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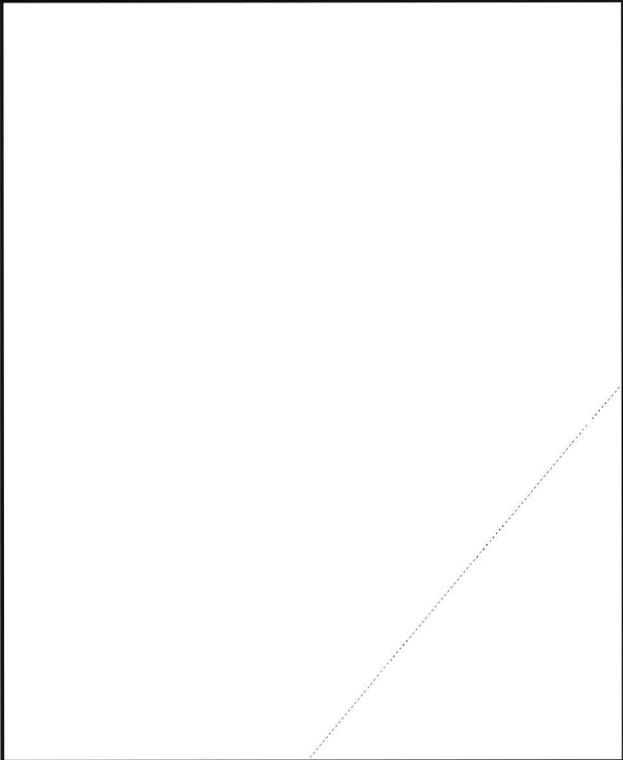
(U) Attitudes change. It has been some years now since a senior government official said, "Gentlemen don't read other people's mail." It is not resting on our laurels to say that most senior people in our government now recognize the usefulness of what we do. However, there is a new attitude around about secrecy--that it is somehow immoral. And anyone who keeps secrets is evidently immoral too, at least until proven otherwise.

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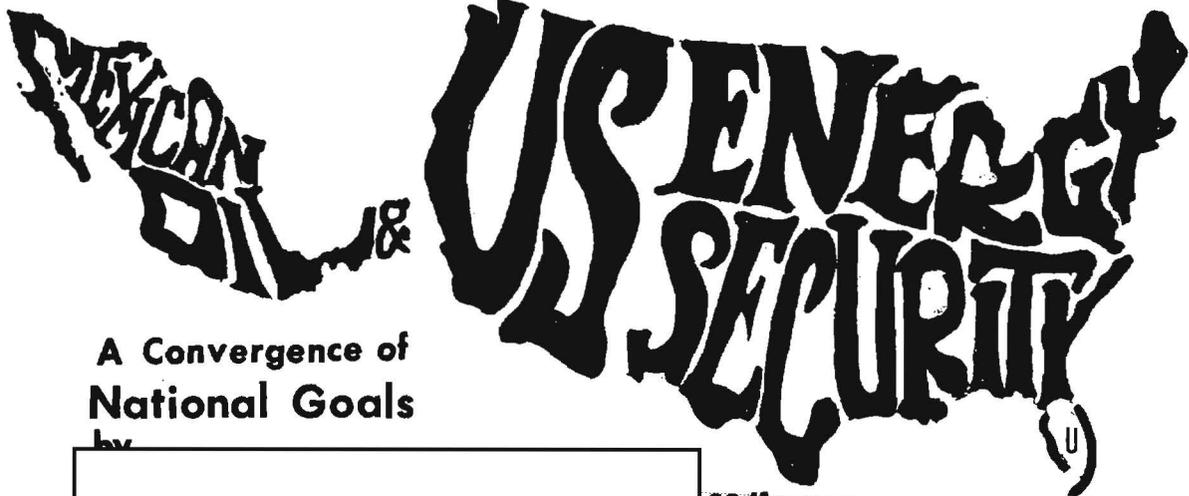
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WES

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S041

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Energy--a basic concept in the industrial world--has taken on an importance to our generation well beyond the confines of its dictionary definition. Energy truly is power--not only in the mechanical sense of force, but also in the global sense of military strength and political control. Energy is not only ability to perform work; it is the basic component of the West's industrial and defense structures. Energy is the foundation of the industrialized world.

(U) Over the last several decades the United States has shifted its military and industrial base so as to now equate energy supply with the supply of crude oil and petroleum products. The seeming world abundance of oil occasioned a transition from traditional reliance on coal to dependence on petroleum. The nation's entire economic structure is built on a foundation of cheap, readily available oil supplies, and its continued functioning is critically dependent on maintenance of those supplies. This transition of energy supply sources could be viewed as a domestic policy issue if it were not for the fact that US oil production is insufficient to meet US oil demand.

(U) The United States, though one of the world's largest producers of petroleum, must import significant quantities of oil to meet its strategic defense and industrial needs. Successful oil exploitation in the US is failing to keep pace with domestic consumption, and the need to import oil to satisfy demand will continue to exist for the foreseeable future. Thus, the security of energy supplies is now a key element in US strategic planning.

(U) This paper was awarded Second Prize in the 1983 Essay Contest of the International Affairs Institute, when the author's name was [Redacted]

(U) There are only two ways to improve a nation's energy security. They are "to reduce dependence on imports of energy--particularly from insecure sources--and, to the extent that such imports are unavoidable, to diversify the sources from which they are obtained." [1] The first requires both a commitment to the development of alternative sources of energy and long lead times. Since the US Government has decreased its emphasis on the development of alternate energy sources for various political, economic, and environmental reasons, and since even a renewed, full-force commitment could not alleviate short- and medium-term energy supply problems, immediate US policy initiatives need to be focused on the diversification of sources of petroleum supply.

(U) Because of the fact that 56 percent of the world's proven oil reserves are located in the Middle East, acquisition of foreign supplies has been heavily weighted toward the nations of that area, but recent history has shown the Middle East to be a region with "significant risk of political disruption." [2] The United States also imports petroleum from other geographic area and has made some effort to diversify suppliers by focusing its oil trade negotiations on the countries judged to be most stable. It is this aspect of US energy policy which must be expanded. Although the long-term stability of a system

of government can never be guaranteed, certain factors point to the advisability of a shift toward Mexico as a more prominent supplier of critically needed US petroleum. The historical roots of oil relations between the United States and Mexico, the overall long-term stability of bilateral relations between the two nations, and the potential for their continued stability create the basis for US consideration of a policy of greatly expanded and strengthened oil ties with Mexico.

(U) Mexico is not in a position to replace Middle East Oil suppliers but, on the basis of politics, geography, and overall mutual economic and strategic benefits, it is a supply source which merits closer examination. Mexico is currently the world's fourth largest producer of crude oil and possesses proven reserves in quantity second only to Saudi Arabia. As a traditional supplier of oil to the US and a nation which enjoys relative political stability--particularly in its relations with the United States--Mexico could become a significant factor in US strategic energy planning. And, in the case of Mexico, the risks of dependence and concomitant vulnerability would be lessened by the mutuality of the benefits based on such a relationship. Mexico's current financial crisis, although partially caused by the downturn in the world oil market, is also dependent on oil for its resolution. Thus the dependence implied in increased US reliance on Mexican oil supplies would be offset by the dependence of Mexican economic recovery on increased oil revenues. Such interdependence would lessen the risks for both sides.

(U) Mexico as a source of imported oil stands apart from the Middle East suppliers for many reasons. Its stability, its geographic proximity to the US and the volume and quality of its oil reserves all add up to an attractive alternate to near-total dependence on Middle East oil suppliers. Mexico's current financial crisis offers the United States an opportunity to develop a strong interdependent relationship with Mexico which could serve the national interests of both countries. Furthermore, the economic strengthening of Mexico could do more than ensure continued political stability in that country; it could concurrently strengthen the US position within the hemisphere, particularly in the now volatile Caribbean region.

(U) Although the ultimate size of the petroleum resources which Mexico possesses will be important to that nation's long-term economic planning, it is already sufficiently large and sufficiently well-documented to support an increase in oil production. Mexico's current reserves-to-production ratio remains conservative by international standards and

could be considerably increased, based on current proven reserves alone. Such an increase requires only the firm decision to proceed, but that decision hinges on both internal and external economic factors. Although Mexico's domestic petroleum needs have been projected at only about 2 million barrels per day by the late 1980s [3], making any significant production increase contingent on petroleum export policy decisions, those decisions will have a noticeable impact on internal Mexican socio-economic conditions and will have to be considered in light of their potential to improve--rather than exacerbate--current economic difficulties.

(U) Despite the risk that the accelerated development of Mexico's oil resources could exacerbate current economic problems and the criticism that such a pace will serve only to deplete the nation's main natural resource, there do not appear to be other viable alternatives. Most Mexican officials recognize that the risk must be taken. Oil--with all its potential for creating further ills--is the answer for Mexico. Despite understandable reluctance to becoming a single-export economy, the exploitation of Mexico's petroleum resources will be necessary--at least over the short run--to provide funding for diversification of the economy through industrial development, export promotion, and revived agricultural output. What does all of this mean to the United States? Can--and should--Mexico's oil potential have an effect on US oil supplies in particular and on US energy security in general? There are several reasons why Mexican crude oil discoveries are of interest to US policymakers, not the least of which is their potential for alleviating several pressures on the security of US supplies.

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SOLUTION TO NSA-CROSTIC No. 52

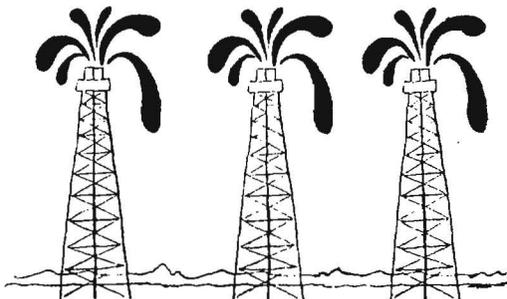
"Education in Diagnosis," by [redacted], NSA Technical Journal, Vol. XIV, No. 1, Winter 1969, and quoted in Ars Conjectandi: The Fundamentals of Cryptodiagnosis, by Lambros D. Callimahos, 1970.

"In brief, the task of the diagnostician consists of collecting and organizing available material, searching for and recognizing phenomena, building up hypotheses and making every effort to knock them down again."

(U) One of the most fortuitous aspects of Mexican petroleum is its quality. Mexico is one of the few sources of light to intermediate grades of crude oil at a time when world supplies of these grades are subject to production restrictions, especially by OPEC member nations. US refineries need and can use Mexican oil, and Mexico is willing to sell it at world market prices. Mexican crudes also contain a low percentage of sulfur, another technical characteristic which makes them attractive to US refiners. In addition, the geographic proximity of Mexican oilfields makes international transport of Mexican crude less expensive and more secure than oil from other sources.

(U) Thus, in view of the US need to acquire more secure sources of crude oil and Mexico's desire to achieve economic stability and growth, the development of a strong, interdependent "special relationship" between the two countries could go a long way toward helping each to achieve its national goals. With a focus on the energy security and economic development issues in an atmosphere of cooperative interdependence, many of the problems between the two nations--trade, finance, undocumented workers, and the like--could enjoy a higher probability of resolution.

(U) By shifting oil supply emphasis away from the Middle East and toward a more stable, dependable supplier in the Western Hemisphere, the United States could greatly enhance the security of its petroleum supplies. A further US decision to speed up the fill rate of the US Strategic Petroleum Reserve (SPR)--relying on long-term Mexican oil supply contracts rather than spot market purchases--would buy additional insurance against energy supply disruption during the upcoming decades of transition to alternative fuels. Active encouragement of Mexico's oil development program--by means of a long-term increased quantity purchase agreement--or passive assistance--using advance payments for oil or bridge financing to ease Mexico's current liquidity crisis--could be sufficient incentive for Mexico to accelerate the exploitation of its petroleum resources.



(U) For Mexico's part, a conscious decision to hasten its exploration for and exploitation of its most valuable natural resource. within a calculated blueprint for socio-economic development, will help to ensure the attainment of modernization.

(U) An analysis of past disruptions of threats to cutbacks of US oil supplies leads to the conclusion that

"only diplomatic/economic efforts which are in the national interests of oil producers will accomplish the [US] goal of oil security." [4]

The United States must be willing to admit that this gives oil producers the ability to create alliances that further their own national goals, but not that this inherently gives producing nations the upper hand in supply relationships. US policymakers can, and should, exploit the self-interests of oil-exporting nations by creating an interdependent environment in which both producer and consumer interests are served. One way in which this can be accomplished is through the establishment of a special relationship with Mexico.

(U) Some political theorists will argue that in today's complex, interrelated world system, the concept of special relationships is outmoded. They contend that the United States must take a global approach to foreign policy issues. Although this argument is not without merit as it pertains to such issues as defense, its applicability to energy security is not as fitting. Surely the global implications of energy supply are, and should be, of paramount concern to the US Government, but the encouragement of special oil supply relationships can enhance, rather than detract from, the overall security of world supply not only by diminishing US vulnerability, but also by easing the growing worldwide competition for Middle East oil.

(U) For the United States, increased oil purchases from Mexico would

- [] reduce dependence on OPEC;
- [] lessen the probability of precipitous price increases because of the already strong interdependence of the two nations' economies; and
- [] facilitate the transition to alternate energy sources by providing "insurance" during the period of passage.

But perhaps the most important reason increased Mexican production and export would

enhance the security of supply worldwide lies in its psychological value. "The OPEC countries are well aware that Mexico has huge petroleum reserves which are growing rapidly as exploration continues. The mere knowledge that there is a growing new petroleum source seems likely to reduce the power of the other oil exporters to influence the West with implicit threat of an oil embargo." [5]

(U) The principal result of increased US dependence on Mexico as a source of imported oil would be reduction of its reliance on Middle East oil. In addition to serving US national energy security interests, such a shift could also enhance worldwide availability of oil by decreasing the impact of US involvement in the anticipated intense competition in the 1980s among West European nations and Japan--and possibly even the USSR [6]--for access to Middle East oil.

(U) Furthermore, diminished US presence in and dependence on Middle East oil-producing nations need not imply a diminished concern for security of the region. Not only would the US continue to work toward achieving peace in the Middle East out of basic concern for the overall goal of worldwide peace and stability, but also because the supply security of its West European and Japanese allies hinges on the security of the region. In fact, decreased US reliance on Middle East oil supplies could enhance the credibility of US peace initiatives in the region by deflecting the charges of "self-interest" and "ulterior motives" often leveled by Arab spokesmen.

(U) It becomes increasingly clear that Mexico could--and probably should--become an important source of oil imported by the US in the coming years. But it must be remembered that even the immensity of recent Mexican oil discoveries will only postpone by a decade or so the inevitable era of oil scarcity. Nonetheless, those discoveries can "buy consuming nations the time needed to curb their growing appetites for oil and to make less disruptive the conversion to more abundant energy sources." [7]

(U) Energy security, particularly during the upcoming period of transition to renewable sources, will require a balance of power between the oil-exporting nations and the US. The pursuit of a special oil supply relationship with Mexico is a step toward creating that balance of power, both by reducing Middle East influence over US policy through decreased imports (and, hence, decreased vulnerability) and by enhancing hemispheric stability through the creation of a mutually beneficial interdependent relationship.

NOTES

1. Energy Requirements and Security, Report by the Combined Energy Staff, International Energy Agency, Organization for Economic Cooperation and Development; Paris: n.n., May 1983, p. 29.
2. Ibid., p. 2.
3. Richard B. Mancke, Mexican Oil and Natural Gas: Political, Strategic and Economic Implications; New York: Praeger, 1979, p. 61.
4. Edward J. Laurance, "An Assessment of the Arms-for-Oil Strategy," in Energy and National Security, ed. Donald J. Goldstein; Washington: National Defense University Press, 1981, p. 89.
P.L. 86-36
5. Mancke, op. cit., p. 128.
6. Some analysts, predict that because of the diminishing production capability and lack of advanced recovery technology, the USSR will become a net importer of oil in the 1980s.
7. Senator Frank Church, Foreword to Congressional Research Service's Mexico's Oil and Gas Policy: An Analysis; Washington: Government Printing Office, 1979, p. v.



GOLDEN

OLDIE [U]

Publication of VNs [decrypts] was strictly forbidden. Each VN was classified as Secret (Geheime Kommandosache) and enjoyed the highest security protection. It was forbidden to mention VNs and decipherment outside of the office and inside only with those personally known, not with unknown officers and officials, so called visitors who came in on one pretext or another. Every serious cryptologist knows the consequences of publication of a VN. When Ambassador Page published the Zimmerman despatches after World War I, Chi used these to prove how important exact decipherment is and how important it is that every cryptographic system be tested before being put into use. And Page's publication was worth more than a whole series of lectures! [1]

Once when an English correspondent obtained knowledge in AA [Foreign Office] of an Italian VN deciphered by Chi and published it in a Manchester paper, including an error in decipherment, this Italian system was replaced and Ambassador Amadori (who, as Fenner recalls, was then in Riga) was likewise replaced.

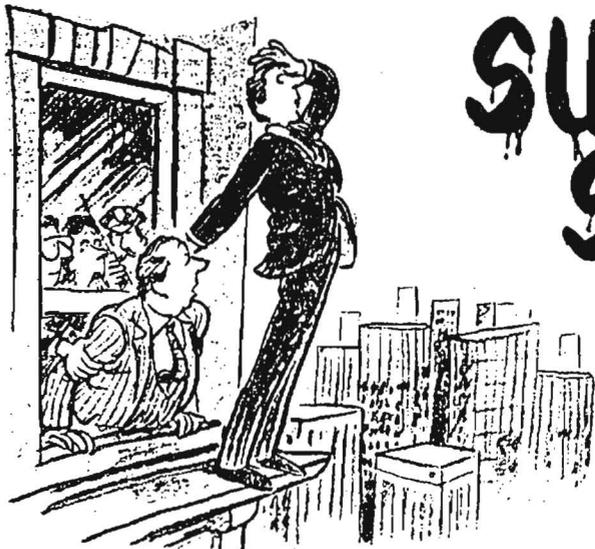
In general the rule was that publication of all sources 25 years after an important event is as soon as it will serve the truth. Earlier may be very intriguing but there will be so many decent people involved, people who have erred not from bad motives but solely from human inadequacy, that it is better to maintain silence and wait. (For this reason there was still no exact story of certain events of World War I).

During his debriefing after World War II, Wilhelm Fenner, Ministerialrat of the Signals Intelligence Agency of the High Command, German Armed Forces (OKW/Chi), was asked whether publication of decrypts between the wars had any effect on German cryptology. This was his answer. Extracted from TICOM/I-206, dated 7 August, 1947. This is classified ~~TOP SECRET HYCCO~~ in its entirety.

When the French Intelligence Service learned that Chi was working successfully on French diplomatic ciphers, this information alone was enough to induce the Quay d'Orsay to replace certain ciphers sooner than was its wont. Thus not only every publication but de facto every rumor, represents a danger for one's cryptologic work, the purpose of which is not lust for sensation but promotion of the security of the country one serves, with means which one prefers to employ when dynamite and acetylene torch would draw too much public attention, and would endanger it without bringing the slightest gain.

1. The publication of the Room 40 crypt solution of the Zimmerman telegram in 1924 was followed by German comsec changes.

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SUICIDE SHELL(4)

P.L. 86-36

by

Some years ago, somebody came up with a little box that would shut itself off. The box had an ON/OFF switch on the front; when you turned it on, the lid slowly raised up and an arm came out, turned the switch off, and silently withdrew back into the box.

You can make a shell file do more or less the same thing: turn itself off. I call such a file a suicide file, and you can make one by putting in as the last line:

```
rm shellfile
```

The file will dutifully take all the actions you have listed and, like the little box, as the last action, remove itself from the current directory.

I find a lot of uses for this feature. Suppose I have a directory full of pieces of my work and I want to divide the files into two groups and put one of those groups into another directory. In the example below, the directory 'part1' contains files from sect1.* and sect2.* and I want to set up all the sect2.* files in another directory called part2. Using the UNIX line editor 'ed' and a "suicide" shell file called 'junk', the following dialogue illustrates how the shell is created that moves the files and then disappears.



```
% pwd
/u6/wes/demo/part1
% ls -l
-rw-r----- 1 wes 2462 Apr 17 16:11 sect1.1
-rw----- 1 wes 2842 Apr 17 16:11 sect1.2
-rw-rw---- 1 wes 2336 Apr 17 16:11 sect1.3
-rw-r----- 1 wes 4510 Apr 17 16:11 sect1.4
-rw----- 1 wes 1024 Apr 17 16:11 sect1.5
-rw-r----- 1 wes 2026 Apr 17 16:11 sect1.6
-rw-r----- 1 wes 3762 Apr 17 16:08 sect2.1
-rw----- 1 wes 4274 Apr 17 16:08 sect2.2
-rw-rw---- 1 wes 3455 Apr 17 16:08 sect2.3
-rw-r----- 1 wes 7011 Apr 17 16:08 sect2.4
-rw----- 1 wes 1168 Apr 17 16:08 sect2.5
total 77
% cd ..
% ls -l
drwxr-xr-x 2 wes 256 Apr 17 16:11 part1
total 1
% mkdir part2
% ls -l
drwxr-xr-x 2 wes 256 Apr 17 16:11 part1
drwxr-xr-x 2 wes 112 Apr 17 16:14 part2
total 2
% cd part1
% ls sect2.* > junk
% ed junk
40
5>l:
 1 sect2.1
 2 sect2.2
 3 sect2.3
 4 sect2.4
 5 sect2.5
5>l,$s/^.*$/mv & ../part2/
5>l:
 1 mv sect2.1 ../part2
 2 mv sect2.2 ../part2
 3 mv sect2.3 ../part2
 4 mv sect2.4 ../part2
 5 mv sect2.5 ../part2
```

```

5>a
rm junk
.
6>l:
 1 mv sect2.1 ../part2
 2 mv sect2.2 ../part2
 3 mv sect2.3 ../part2
 4 mv sect2.4 ../part2
 5 mv sect2.5 ../part2
 6 rm junk
6>f
junk
6>w
108
6>q
% sh junk
% ls -l
-rw-r----- 1 wes 2462 Apr 17 16:11 sect1.1
-rw----- 1 wes 2842 Apr 17 16:11 sect1.2
-rw-rw----- 1 wes 2336 Apr 17 16:11 sect1.3
-rw-r----- 1 wes 4510 Apr 17 16:11 sect1.4
-rw----- 1 wes 1024 Apr 17 16:11 sect1.5
-rw-r----- 1 wes 2026 Apr 17 16:11 sect1.6
total 35
% cd ..
% ls -lx
drwxr-xr-x 2 wes 256 Apr 17 16:15 part1
-rw-r----- 1 wes 2462 Apr 17 16:11 sect1.1
-rw----- 1 wes 2842 Apr 17 16:11 sect1.2
-rw-rw----- 1 wes 2336 Apr 17 16:11 sect1.3
-rw-r----- 1 wes 4510 Apr 17 16:11 sect1.4
-rw----- 1 wes 1024 Apr 17 16:11 sect1.5
-rw-r----- 1 wes 2026 Apr 17 16:11 sect1.6
drwxr-xr-x 2 wes 112 Apr 17 16:15 part2
-rw-r----- 1 wes 3762 Apr 17 16:15 sect2.1
-rw----- 1 wes 4274 Apr 17 16:15 sect2.2
-rw-rw----- 1 wes 3455 Apr 17 16:15 sect2.3
-rw-r----- 1 wes 7011 Apr 17 16:15 sect2.4
-rw----- 1 wes 1168 Apr 17 16:15 sect2.5
total 82
%

```

To get us oriented, we begin with 'pwd' to print the working directory. The answer tells us we are in my account 'wes' (a part of filesystem u6) and that within my directory 'demo' we are in a subdirectory called part1. The long form listing of the directory (ls -l) gives us a lot of information, but here we are mostly interested in seeing that we have two groups of files, one called sect1.x and the other called sect2.x .

The command cd .. changes the directory to '..' which is the one above the current one; in other words, move "up" to 'demo'. There is only one subdirectory in demo: part1. We then make a new directory called 'part2' and then change directory back down to part1 where we will begin to build the shell to move the sect2.x files.

We begin by using 'ls' (the short form this time since we only want the file names) to give us every filename that begins with

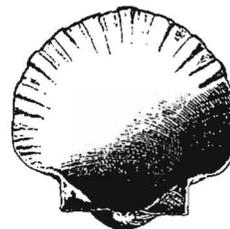
'sect2' followed by anything (or nothing), and this list of file names is put into a new file called junk. The line editor 'ed' is then called with the new file and after first looking at the contents (l:), the following line creates the file we want using the ed substitute (s) command. A loose translation of that line would be:

1. From the first (1) to the last (\$) line;
2. Substitute on each line...
 - a. From the beginning of the line (^);
 - b. Including every character (.*);
 - c. To the end of the line (\$);
3. The following replacement:
 - a. The UNIX command for file move (mv);
 - b. The entire original line (&);
 - c. The string '../part2'

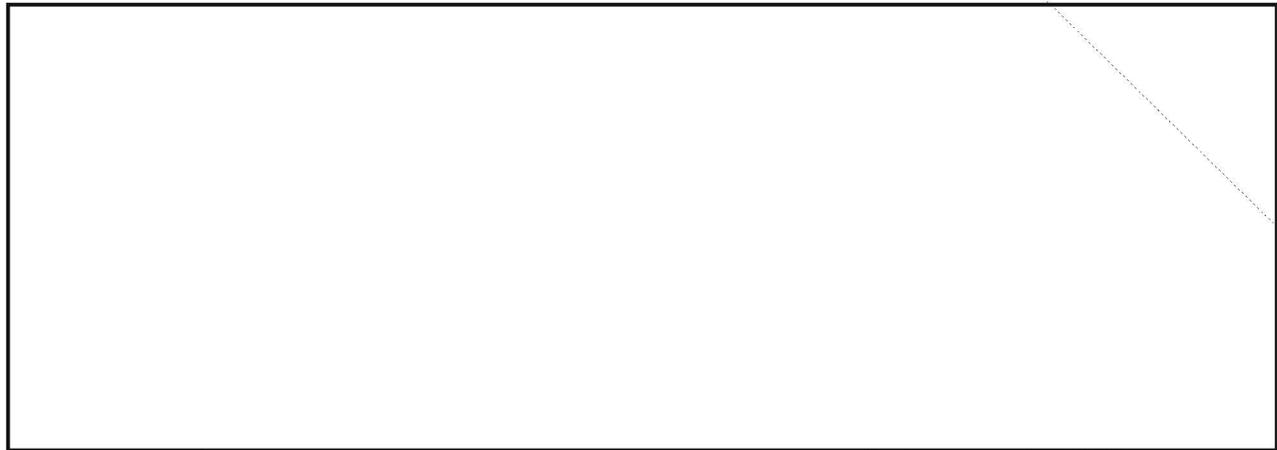
The new directory is called '../part2' because to get to it from where we are (in part1), we must first go up one level (to '..') and then back down to 'part2'. We now review what the file looks like (l:) and it consists of five separate move commands. To keep things tidy, we add the suicide line using the append command and once again review the file.

At this point, the shell file is ready to run, but I try to remember to verify what the file name is before leaving, partly to insure that the suicide line will throw away the correct file. All the work we have done in the editor is still in a temporary file; the original version of junk still resides as it was before we entered the editor. The write command sends the current version of junk off to replace the old, and we can then leave the editor with the quit command.

The only thing left to do now is to execute the suicide shell (no pun intended) and then look at the results to be sure we did what we wanted to do.



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P.L. 86-36



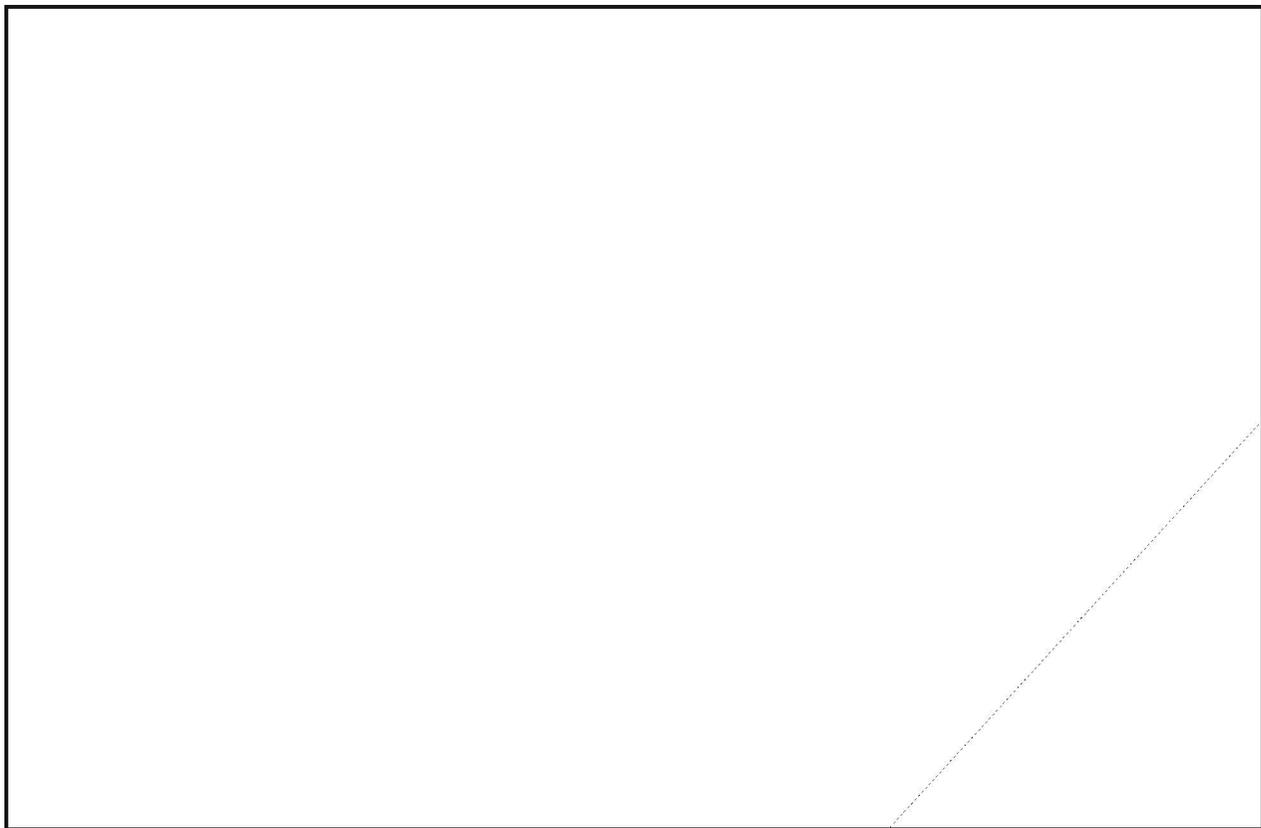
by



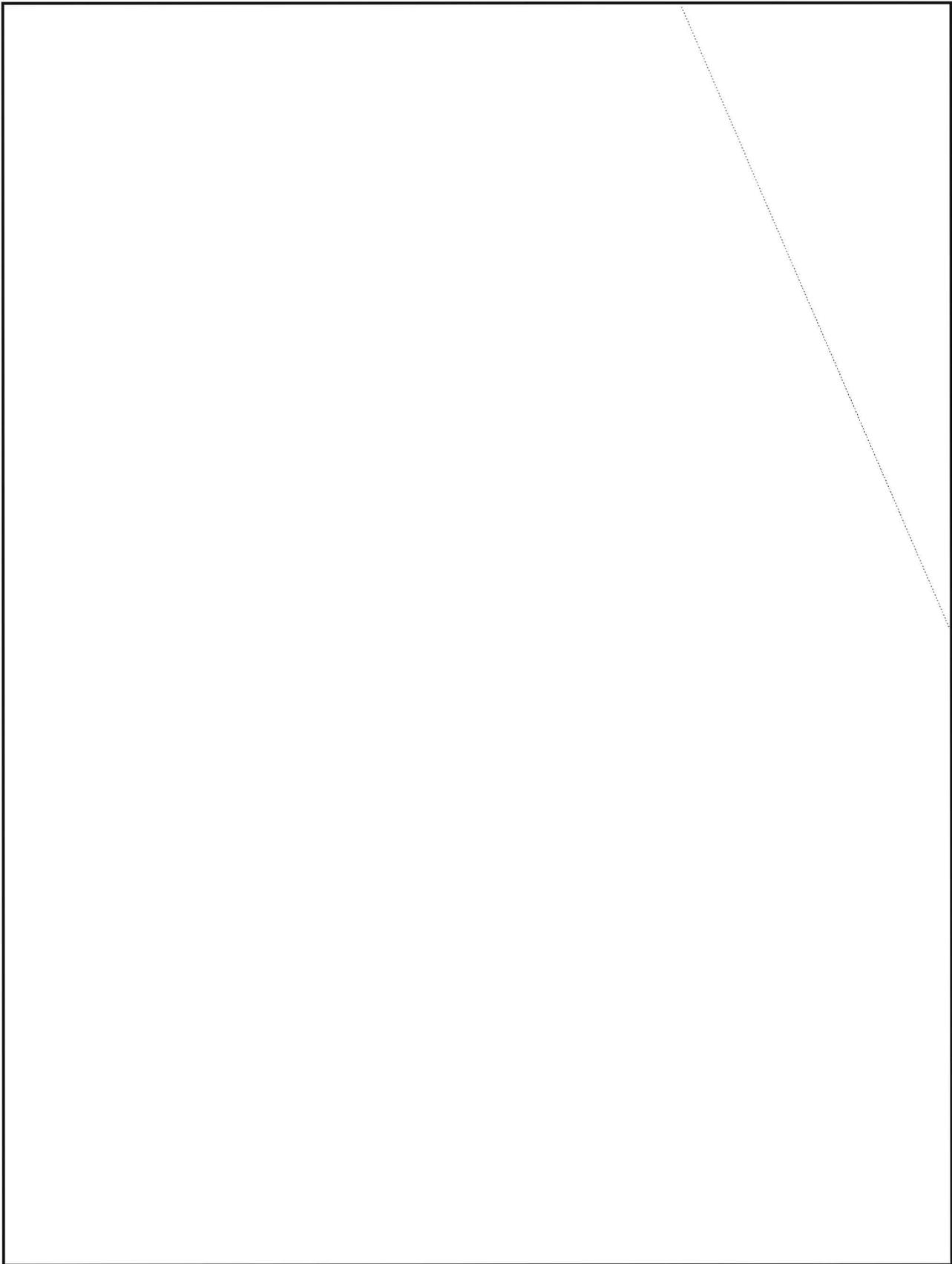
B DSO, Kunia, Hawaii



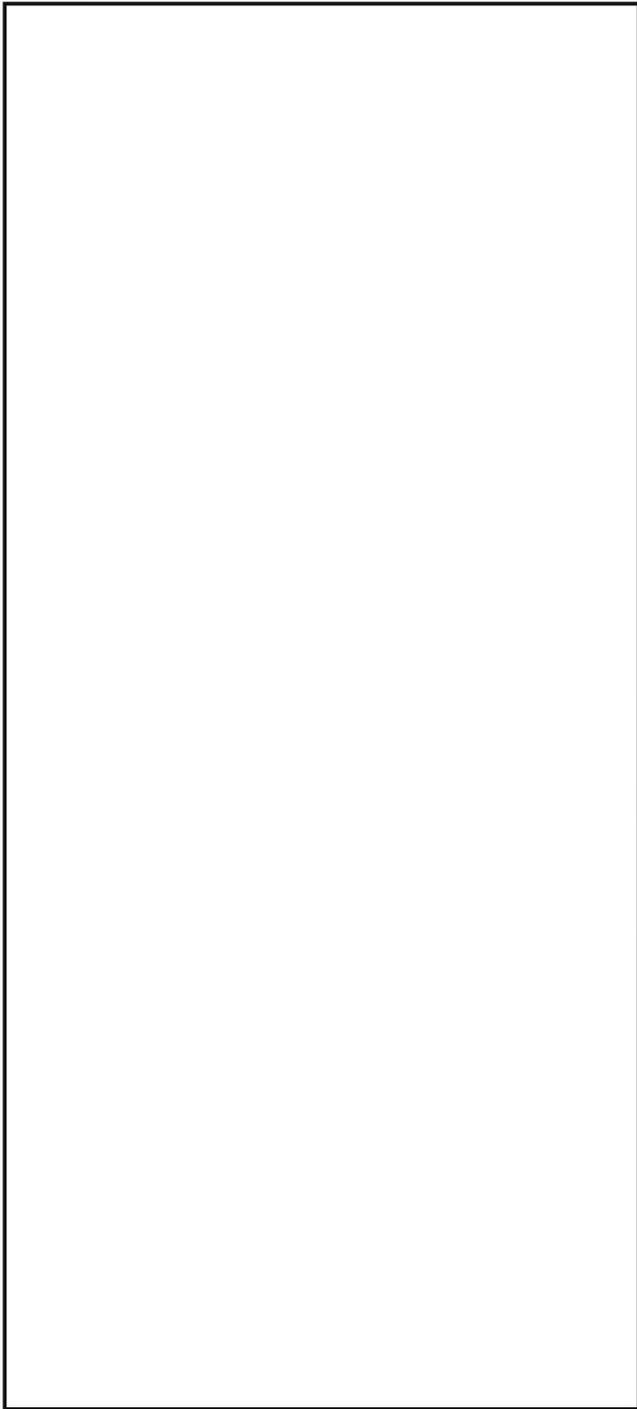
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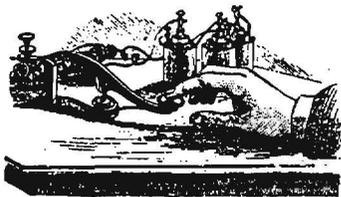
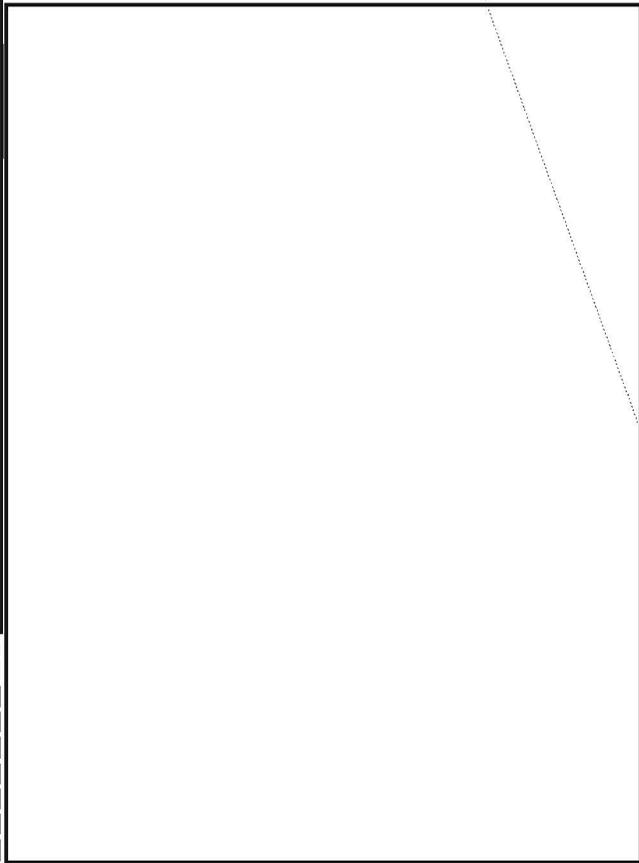
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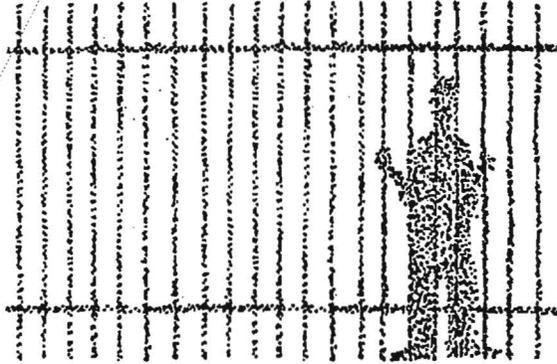
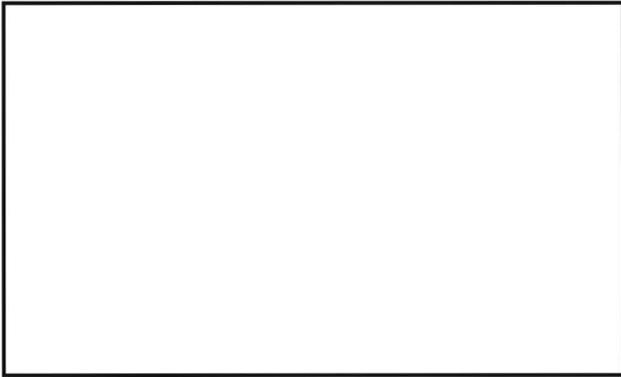
Answers to
N-U-M-E-R-O-L-O-G-Y Quiz ~~(C-666)~~
(previous issue)





by **jre**





On 22 March 1984, the Director declassified the following documents:

- [] Military Cryptanalytics, Part I (Monoalphabetic Substitution Systems), by William F. Friedman and Lambros D. Callimahos, published by NSA in 1956.
- [] Military Cryptanalytics, Part II (Periodic Polyalphabetic Substitution Systems), by Lambros D. Callimahos and William F. Friedman, published by NSA in 1959.
- [] The Friedman Lectures on Cryptology, published by the National Cryptologic School in 1965.

Also declassified are Military Cryptanalysis, Part I (Monoalphabetic Substitution Systems) and Part II (Periodic Polyalphabetic Substitution Systems), by William F. Friedman, published by the Government Printing Office in 1938.

Anyone holding copies of these books should send them or bring them to T541 (Cryptologic Archives), SAB 2, Door 3, at Fort Meade. They will be given a declassification marking and will be returned to the holder. In case of large holdings of the books, arrangements may be made for us to come to you. Please call the Archives on 972-2268.

SOLUTION TO NSA-CROSTIC No. 54

"The Things They Say." by Doris Miller, KEYWORD, August 1968, and reprinted in CRYPTOLOG, November 1976.

"'I know it doesn't make sense, but that's what it says!' This is the granddaddy of them all, the [great] classic disclaimer...the most spontaneous, universal, and irrepressible outcry in the translating world. [Surely,] there is no one in the business who hasn't given tongue to it at some time."



**WE ARE ALWAYS
LOOKING FOR
ARTICLES, COMMENTS,
NOTES, LETTERS,
THAT WOULD BE
OF INTEREST TO
OUR READERS**

ISPY



à la Moscow: A Soviet View of US Intelligence Activities (U)

by

P.L. 86-36



(U) In the wake of the attempted assassination of Pope John Paul II, the Soviet Union became the target in the Western press of allegations that it was the ultimate source of international terrorism. To counter these allegations, the Soviet Union has resorted not only to its periodical press, but also to popular fiction to reach those segments of its population that do not follow Pravda or Izvestia as closely as the Communist Party of the Soviet Union (CPSU) might like. In May 1983 Molodaia Gvardiia, the official publishing house of the Young Communists' League (Komsomol), brought out what they termed "a political detective novel" entitled Project Valhalla¹. By using the style and format of a detective novel, the Soviets undoubtedly hope to gain wider acceptance of the views presented in the novel. For the average Soviet citizen, the novel, which is based on "actual recent events" [128], should have a very high degree of credibility, especially since the view of the Central Intelligence Agency (CIA) presented in the novel is well supported by an American film, "Three Days of the Condor,"² which is currently being shown in the Soviet Union³.

(U) The novel depicts the machinations of an international, ultra-rightist, anti-Communist, neo-Nazi group, the "Brown Front," which is attempting to "return" to power in Germany, Italy, Japan, and Spain. The theme of resurgent Nazi power strikes an especially responsive chord in the Soviet Union, where World War II is written about as if it ended only yesterday. Every year scores of new books about the War are published in the USSR. Articles about the War are commonplace in the periodical press. Russian schoolchildren to

"There is no need for propaganda to be rich in intellectual content."
--Joseph Goebbels

this day stand guard at the tombs of the war dead, the number of which (20,000,000) the Soviets continually cite as proof that they suffered more than anyone else at the hands of the Germans during WWII. Even Soviet page-a-day calendars carry a warning against resurgent Nazi power. The page for 23 November 1983 cautions that:

The assertions of the West German authorities that the scope of the criminal activities of neo-Nazi forces has expanded dangerously and that it is time to put a stop to them remain just so much noise⁴.

(U) In the scenario laid out by the author, the Soviet Union is merely the innocent victim of the ruthless anti-Soviet campaign. The Brown Front, which is made up of Nazi war criminals and their now grown offspring, is gaining support among the masses who believe that "without a strong hand (at the helm) the rule of order will disintegrate" [103]. Since "the masses only respect and acknowledge strength and decisiveness" [103], these are the qualities that the Brown Front demonstrates in its campaign of political terror. The Brown Front is "successfully organizing terrorist acts in Italy and West Germany pretending to be leftists" [88]. "There are more than 20 fascist terrorist groups operating in Italy" [90], where "the Marxists have become far too numerous" [103].

(U) The Brown Front has, with the complicity of the CIA and the assistance of the Republic of South Africa, established a research institute in an unnamed South American country to develop its own atomic weapon. The code name for this project is Valhalla. They plan to use the weapon as "a sort of atomic terror" [103] to blackmail the government of the Federal Republic of Germany into political concessions or, should that prove impractical, to send the weapon into the Soviet bloc aboard an American aircraft and detonate it. "After all, siccing Moscow on Washington wouldn't be bad (for us) either" [104].

(U) As the book closes, the President's National Security Adviser states at a press conference: "A report prepared by the Central Intelligence Agency contains substantial evidence of the involvement of one of the great powers in terrorist acts in Europe" [123]. In spite of the fact that the "leftist press, armed with the facts, had begun reporting on the political terrorism being spread by the neo-Nazis" [122], the Western press reported the Security Adviser's statement in banner headlines such as

SOVIET UNION ENCOURAGES TERRORISM

and

RUSSIANS BEHIND KILLINGS
IN GERMANY AND ITALY [124].

(U) Riding on the wave of excitement surrounding this announcement, the President of the United States "asked Congress to allocate supplementary funds to combat international terrorism and to strengthen the Rapid Deployment Force" [124]. The author thus implies that it is the United States, not the Soviet Union, that is responsible for international terrorism and that the US is conducting a disinformation campaign in the press against the Soviet Union in order to cover up the covert (i.e., terrorism) and gain support for the overt (i.e., the RDF) arms of its foreign policy.

(U) In the course of developing his story, the author paints an interesting picture of how the Soviets perceive--or would like their citizens to perceive--the motives behind and the methods used in American covert intelligence operations. The Director of Central Intelligence is depicted as a political appointee:

not a professional intelligence officer, (who) sharply felt his lack of expertise. He tried to compensate for his lack of experience through diligence, attention to detail, and hard work. [9]

(He) was a newcomer to the administration and, unlike the other appointees, always took the President's comments too much to heart. His friends had tried to talk him out of the post, predicting some serious unpleasantries, but he hadn't listened to them. He understood, however, that any failure on the part of the Agency would mean the end of his career. [10, 11]

The Director was resentful of not being able to deal with the President directly, but having to go through the President's Security Adviser, Professor White who, prior to his appointment:

had been one of the youngest professors at Princeton and the author of a dozen books on key international issues. The Director was almost as old as White but, in speaking with him, he clearly felt White's superiority. [10]

(U) In spite of his academic degree, Prof. White was "completely unacademic in his approach to politics" [86]. He made his decisions

based not on the analyses presented to him by specialists but was guided by his intuition. ... His political Weltanschauung (was) defined by three things: a hatred of ideology; the dream of forming an international intellectual elite which would rule the world of the future; and hostility toward the Soviet Union. [86]

(U) In the eyes of the author, the real power at CIA was not the Director but his deputy, Edward Malcolm, a professional intelligence officer who

... had served in the Directorate of Plans for 25 years and covert operations were his forte. ... Therefore his appointment to the post of Deputy Director was seen as an attempt by Washington to emphasize not the passive collection of intelligence information, but rather the active interference in the course of world events. [39]

In a statement to the Senate Select Committee on Intelligence at a closed-door session, Malcolm "swore to make the maximum effort to 'stabilize' the world, beginning with Western Europe." [39]

(U) Malcolm made it clear that he felt that "political measures alone would not correct the situation" [92] in Western Europe.

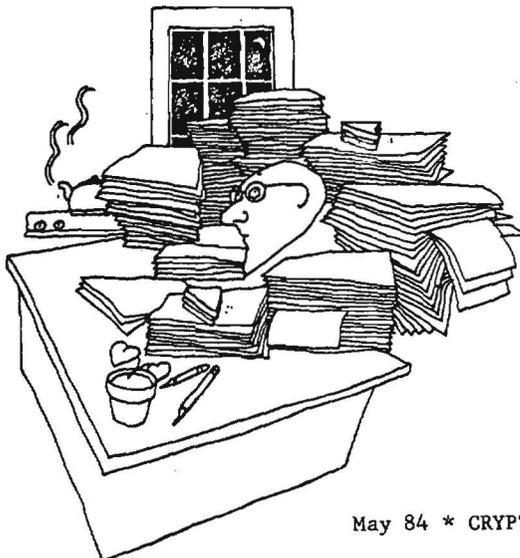
In the late forties and early fifties American secret services, using every possible method from bribes to blackmail, managed to remove the Communists from the governments of France and Italy and to push these countries into the "cold war." As a consequence, the CIA was able to achieve some successes.

However, in the last few years CIA operations for "stabilizing" Western Europe had been unsuccessful. Besides that, Washington has more and more often demanded the active support of the Western European capitals in its anti-Soviet strategy. [93]

Malcolm, therefore, believed that "well worked-out, coordinated covert operations in Western Europe" [93] were necessary and ordered a standard operating plan drawn up to outline the "principles and methods of action for correcting the political course of this or that country" [93]. Since the plan was to be presented for White House approval, he also instructed that counterarguments for any possible criticism of the plan be prepared:

Interference in the internal affairs of a sovereign power is illegal and immoral, but almost everybody does it. Besides that, every country has the right to use force in its own defense. Our actions against Communist intrigues are justified as the defense of our forward positions. Therefore, our actions are moral and necessary. [93]

(U) Malcolm was the personification of the rift between the collection and analysis of intelligence information and active covert operations. He "hated analyzing intelligence data and compiling memoranda and reports" [39]. The Directorate of Plans, of which Malcolm had so long been a part, was the part of the CIA that



... conducted subversive operations. The overseas residencies, which were subordinate to the Deputy Director of Intelligence, looked askance at the people who did the dirty work. The poorly concealed dislike that the two services had for one another made their members keep track of the actions of the other with suspicion. Since the orders of Edward Malcolm, the Deputy Director of CIA for Plans, were carried out by the overseas residencies with some reluctance, in the countries that interested it the Directorate of Plans had created small groups of its own which were only formally subordinate to the resident. [25-26]

(U) The theme of the need to give preference to active measures over the passive collection of intelligence is echoed in the book by James Jackson, Malcolm's assistant, who says:

"We get in a stack of paper everyday that you couldn't read in a month. It's those who were failures as college professors and were seduced into our line of work by the adventure who think that intelligence is the compilation of fat reports that present a dozen different possibilities with an equal number of proofs for all of them. Just take your pick! It's this defective approach that's paralyzing the political decision-making process. Intelligence is supposed to provide clear-cut answers to the questions. The world is becoming unsettled, and on various parts of the globe events are taking place that we have no control over. You already know the results: the United States is retreating under the pressure of world Communism and is losing influence in areas of the world vital to our national interests.

"We don't want to waste our forces ... on crisis management. Our goal should be the formation of a future which is built on our value system. The process of selecting policies capable of influencing events on a global scale should be an ongoing one, based on thorough analysis, timely planning, and carefully considered decisions. I'm talking about the difference between active and passive policies, between the ability to influence the course of events and just attempts to react to the events. We have to overcome the problems before they overcome us. If you like, it's the difference between the academic approach of the people in the Directorate of Intelligence, trying to make sense out of what's happening, and the activities of our department, trying to make events work for us." [26-27]

(U) This is exactly the reasoning advanced in "Three Days of the Condor" by Cliff Robertson, portraying Deputy Director Higgins of the CIA's New York Center when he defends the renegade operation to invade the Middle East that was being planned by the Deputy Director for Mideast Operations:

The fact is there was nothing wrong with the plan. Oh, the plan would have worked. ... It's simple economics. Today it's oil, right? In 10 or 15 years--food, plutonium. Maybe even sooner. Now what do you think the people are going to want us to do then? ... Not now! Then! Ask 'em when they're running out. Ask 'em when there's no heat in their homes and they're cold. Ask 'em when their engines stop. Ask 'em when people who've never known hunger start going hungry. You want to know something? They won't want us to ask 'em. They'll just want us to get it for 'em.

The fact that this is an American movie lends a great deal of credence to the perceptions of American motives and methods described in the book. For those readers who did not manage to see the movie, the recent invasion of Grenada will certainly make the book's emphasis on active measures to achieve political goals more credible.

(U) In addition to providing verbal portraits of the elite of the US intelligence community, the author of Project Valhalla also sketches US intelligence operations overseas.

(U) In Spain the CIA considered its main goal to be:

- "1) to hinder the Communists in the country from improving their position;
- "2) to bring Spain into NATO; and
- "3) to help the rightists to power." [43]

(U) In Madrid the local CIA residency was housed on the seventh floor of the US embassy. There the 30 people assigned to the residency were carefully analyzing everything that was taking place in the country and evaluating the chances of success for the military coup that had begun with the seizure of the Spanish Parliament.

(U) The attempted coup in Spain appears to be the "actual recent events" [128] upon which the novel is partially based. This event received such wide coverage that it would be nearly impossible for the average Soviet reader not to have at least heard about it or

about the subsequent entry of Spain into NATO. The author plays on the Soviet citizen's tendency to discount the amount of truth in the press by showing a similar reaction on the part of Deputy Director Malcolm to the summary of press reports on the unsuccessful coup in his morning briefing. The press had reported that:

Agents of the CIA had established strong ties with the young ultra-rightist officers who had created the Spanish Military Union, modeled after General Franco's underground organization which started the mutiny of 18 July 1936. ...

The conspirators had met with an American Presidential Adviser ... (who) did not promise any concrete help to the conspirators but, at the same time, did not exclude the possibility of cooperation with them if the coup succeeded. ...

Several Spanish journalists cooperating with the CIA, on instructions from Langley, had prepared special materials sharply criticizing the cabinet for its inability to rule the country, calling for the creation of a strong government, and praising the military. At the present time there are more than 40 journalists cooperating with the CIA. The CIA has at least one of its people at every influential newspaper, magazine, and radio station in the country. ...

In order to ensure that the ultra-rightist Fascists would come to power, the CIA promised to place American troops stationed at Torrej'on de Ardos, 15 kilometers from Madrid, at the disposal of the conspirators. ...

On the evening before the attempted overthrow, two American military transport ships with cargoes of arms and ammunitions for the conspirators, docked at a port not far from Valencia. [63, 64]

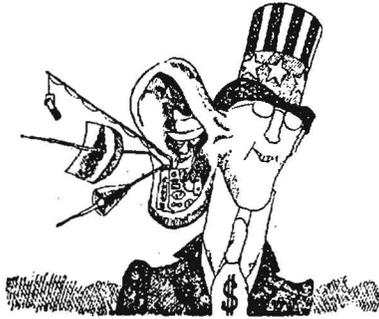
Malcolm was upset because an actual CIA operation had been uncovered by the press. He did not mind "the fabrications" about the ties with the Spanish Military Union or the journalists; after all, "everybody blames everything on the CIA these days" [64]. He was upset because American interest in the success of the coup and the arrival time and mission of the two transport ships had been leaked to the press.

(U) This approach shows the Soviet reader that, while perhaps not everything that appears in the press about the CIA is true, some of it is. This will in turn reinforce the reader's natural assumption that while not

everything in this book about the CIA is true, some of it must be.

(U) The CIA's final analysis of the events in Spain was not that the coup had been a total failure but rather that, even though it was unsuccessful, it would hasten the process of bringing Spain into NATO.

Madrid would protect itself from another attempted coup on the part of the ultra-rightist military officers and at the same time curtsy to us. So the leak of information about our possibly being interested in the military's coming to power will only push Madrid toward rapprochement with us. [64]



(U) Rome is pictured as the center of the American telephone intercept system in Italy. Located at 153 Via Cristoforo Colombo under the guise of a NATO communications facility, the center provided the results of its 24-hour monitoring of the city's telephone network to several customers, including the CIA residency in Rome. [54] As a result of the intercept of a telephone call from a provincial police commissioner to one of his friends in Rome about the case he was investigating involving the terrorist organization called the "Militant Order of Mussolini" (the Italian branch of the Brown Front), the commissioner was removed not only from the case, but from the police force as well. [90]

(U) In Tokyo the CIA residency is pictured as having a close working relationship with the foreigners' department of the Tokyo police, the members of which the CIA pays well for "interesting information." [20] Besides the residency, Tokyo also has a special group from the Directorate of Plans, which is housed separately from the residency on the 15th floor of the Hotel Asahi [25]. The CIA further has the ability to monitor the telephone calls of selected individuals in at least Kyoto and Nagoya [76]. In spite of the considerable emphasis the author places on active measures, the only task accomplished by these CIA activities is the collection of in-

formation on the "Movement for a Greater Japan," the Japanese branch of the Brown Front.

(U) In the book, the CIA also controls an airline called Central Aviation Transport Agency, the abbreviation for which, CA, sounds "almost like CIA" [28]. Pilots for CA were all ex-air force officers who had been kicked out of the service for one reason or another. They trained together "on the farm" [29] with regular air force pilots from the "weather service squadron" [29], who were in fact spy plane pilots. CA planes flew from USAF bases all over the world delivering arms to insurgents in Laos or intervening wherever necessary. Of course, the facet of CA's activities given the most coverage in the book was its covert shipments to the Brown Front laboratory in Latin America [28, 29].

(U) One of the key subplots in the story is the detection by the US intelligence satellite Orion of a the Brown Front's first nuclear bomb.

Intelligence satellites had long ago become part of the routine of the Agency. Every year two or three behemoths filled with expensive equipment would be launched from an air force base in California. Traveling at 18,000 miles per hour, the satellites circled the globe once every hour and a half taking pictures of objects that interested the agency during every orbit. Urgent photographs were transmitted to the ground immediately in much the same way that television signals are relayed; the remainder of the pictures were ejected and returned to earth in a special canister. When it entered the earth's atmosphere, a parachute would open, slowing its fall. The canister would be caught in midair by a special air force unit stationed in Hawaii or would be fished out of the water. [7]

(U) The author points out that the most interesting thing about Orion's detection of the detonation was that Orion was not where it was supposed to be. "It had been launched more than ten years ago and over the years its navigational equipment had become defective so that it follows an unpredictable orbit" [7] Because the area in which the detonation took place was not one that the Agency normally took imagery of, it was only "by accident" [7] that the detonation was detected.

(U) As the story progresses, it becomes clear that a passenger liner "which had strayed from its course" [116] was destroyed by the test of the Brown Front's nuclear weapon.

The detonation could have been delayed, giving the ship a chance to leave the area, but the residents of the (Brown Front) Institute were in a hurry to find out if Project Valhalla was successful. The fate of 150 people did not disturb them. [116]

(U) Nor was the fate of those people of much consequence to the CIA agent whose job it was to exploit the Brown Front. Rather than exposing the Front to the world when he found out that they were the ones responsible for the loss of the ship, he decided to sidetrack the investigation of the nuclear detonation detected by the wayward Orion satellite to the Directorate of Plans to ensure that knowledge of the real reason for the ship's loss would remain a secret. His knowledge of the Brown Front's culpability would provide him with extra leverage to extract "additional services" [102] from the Brown Front for the CIA.

(U) When it eventually became necessary for Prof. White to suppress his investigation of the nuclear detonation, he gave Deputy Director Malcolm a severe reprimand. In dressing down Malcolm, White noted that this whole affair with the bomb had been just plain madness, and much too adventurous. "But, in principle, the ideas that (Malcolm) was developing appealed (to White). The ideas, but not their execution." [124] James Jackson, on the other hand, who had been directly responsible for operations with the Brown Front, was forced to leave the Agency. But that was really only a slap on the wrist, as he was simply moved to a position with Boeing.

(U) While Western society was aghast at the Soviet Union's allegations that the United States had sent Korean Airlines flight 007 over Soviet airspace on a spying mission "with the knowledge that there might be, and perhaps the hope that there would be, a loss of human life," the scenario presented in Project Valhalla, which was written well over a year before the KAL 007 incident, clearly shows that the Soviets believed the United States capable of at least condoning the loss of 150 innocent lives as the price to be paid for a covert operation that went wrong.

(U) Since an action of this kind on the part of the United States cannot be supported by any prior similar action, it is reasonable to look for the basis of Soviet belief in another area. The most logical alternative source is mirror imaging. That is, attributing to your opponent motives and actions which you yourself would take in a similar situation. In other words, the Soviets believe that we would risk the lives of innocent civilians in a covert intelligence operation be-

cause they would do so themselves. Indeed, mirror imaging should be considered as a possible source for all the methods and motives attributed to US intelligence activities in this book. The perceived need for the US to undertake covert action in Western Europe may be easily viewed as a Soviet interpretation of the US response to its problems in Western Europe based on the Soviet experience in Eastern Europe. The view of the US's desire to support rightist terror in order to bring about a favorable change of government or policy may be seen as the mirror image of the USSR's desire to support leftist terror in Western Europe. That the CIA would be assigned the task of bringing a non-member state into NATO to strengthen it is the mirror image of the KGB's being asked to break a member state (Greece) away from NATO to weaken the alliance.

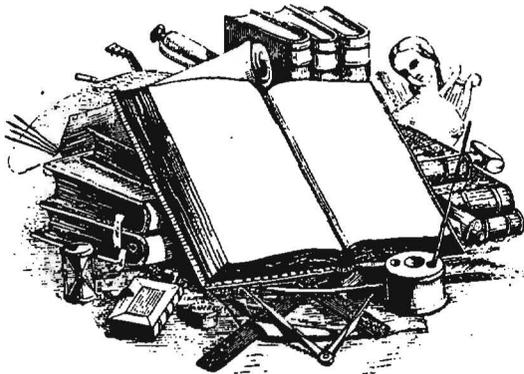
(U) As a propaganda piece, Project Valhalla is a success. It shows the United States as a declining world power that is forced to take active measures to shore up its faltering position of power. The US's slide from power is pictured indirectly in the description of its ten-year-old satellite that only discovered a nuclear blast "by accident" [7] and directly in the "quotes" from members of the US intelligence elite: "In the forties and fifties ... the CIA was able to achieve some successes" [93] but now "the United States is retreating under the pressure of world Communism and losing influence in the areas of the world vital to our national interests" [27].

(U) The targets of the US's active measures are, of course, the Communists. This is explicitly stated in a number of places in the book. One of the CIA's goals in Spain is "to hinder the Communists in the country from improving their position" [43]. The ultimate US goal, however, is "the formation of a future which is built on our value system" [27]. If the President's National Security Adviser has his way, it would be a future ruled by "an international intellectual elite" [86]. In isolation, the Security Adviser's desire is similar to the Marxist-Leninist vision of the future, but the Security Adviser's "unacademic" approach to politics and "hatred of ideology" [86] are antithetical to the "scientifically" founded Marxist theory which has, in the Soviet Union, produced a completely ideological state. Then, as if this were insufficient, the author adds that one of the cornerstones of the Security Adviser's Weltanschauung is "hostility towards the Soviet Union" [86].

(U) The United States is pronounced guilty by association of using Fascist methods in the active measures it takes. By associating the US with the Brown Front, the book hopes to

achieve transference of the fear and hate that the Russian people feel for Nazi Germany into a much more real threat to the Soviet Union: the United States. The Soviet leadership fondly remembers the days when the populace was united behind the government in the defense of the homeland during World War II (which they call "The Great Patriotic War") and would like to have that kind of support that kind of support again. Silencing domestic opposition by uniting the "people against an external enemy" would allow the Soviets to present a unified front to the world without the embarrassment of domestic opposition. Such a united front would make Soviet propaganda directed at the rest of the world (especially the Communist and potentially Communist portions of it) more credible and would make it easier for the Soviets to fend off Western allegations of impropriety.

(U) This book alone will not achieve Soviet goals, but as an old proverb says, "A journey of a thousand miles begins with but a single step." Project Valhalla is therefore of interest as an indication of the direction¹⁰ in which the CPSU wants popular perceptions of US covert intelligence activities to develop.



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SOLUTION TO NSA-CROSTIC No. 53

"Topical Reporting," by CRYPTOLOG, October 1983.

"Identify the areas of primary concern among military thinkers and planners at the present time. This practice has its hazards, though. The tendency in any field of endeavor, but especially in military circles, is to grab a "hot topic" and run with it."

NOTES

1. Mlechin, L. I., Proekt "Val'khalla": Povest' (Project "Valhalla": a novel), Molodaia Gvardiia, Moscow, 1983. Quotes from this novel will appear in this article, followed by the page number in square brackets, [].
2. "Three Days of the Condor," Paramount Pictures, 1975, starring Robert Redford, Faye Dunaway, and Cliff Robertson.
3. Dobs, Michael, "Fascination, Hostility Color Soviet View of US," The Washington Post, 23 October 1983, pp. A1, A25.
4. 1983 Otryvnoj kalendar' (1983 page-a-day calendar), Politizdat, Moscow.
5. On 23 February 1981 Lieutenant Colonel Antonio Tejero Molina led a group of Spanish Civil Guards in the seizure of the lower house of the Spanish Parliament just as it was completing a vote to approve Spain's new government.
6. Spain entered NATO officially on 30 May 1982.
7. Marshal of the Soviet Union Nikolaj V. Ogarkov, Izvestia, 10 October 1983.
8. The novel was released to the typesetter on 25 November 1982 [128].
9. During the time period covered by the "actual recent events" [128] described in the book, the question of whether or not Greece would remain a member of NATO was a major issue in the Greek elections. Also of note during this time frame were Soviet accusations that the West was trying to break Poland away from the Warsaw Pact.
10. Another recent Soviet spy novel Letnaia pogoda (Flying Weather) by Sergei Abramov, Moskovskii Rabochii, Moscow, 1983, describes CIA operations inside the Soviet Union. It also associates the CIA with the Nazis and Nazi methods.



NSA-Crostic #55

Here's the puzzle that answers the question: What would be the world's dullest ball game if cricket hadn't been invented?

A. AL team whose ballpark used to be called Briggs Stadium (2 wds)

84 19 29 166 209 225 13 62 190 50
 116 125 81

B. This AL team used to be based in Philadelphia (2 wds)

103 199 2 120 38 12 55 33 139 27
 135 167 170 90 83 152

C. English meadow where King John granted the Magna Carta (1215)

126 112 144 157 142 91 10 54 174

D. Prosperous, well-off (colloq.; 3 wds)

6 122 25 146 108 14 178 151 130 59

E. Brother or sister; blood relation

200 182 187

F. After one year as the Seattle Pilots, this team moved in 1970 to its present location (2 wds)

97 82 153 159 52 188 16 92 206 23
 117 213 31 127 141 111

G. Either, other (Brit. dial.)

124 7 185 49 93

H. Team formerly located in the only US city having three major leagues baseball teams at the same time (3 wds)

168 4 220 75 207 158 22 78 227 11
 58 215 163 211 17 173 194

I. Restrict; confine; circumscribe

67 143 222 133 184

J. Ancient city of Ionia

181 102 95 172 118 24 30

K. Inflammation or pain in muscles or joints

129 32 192 110 65 119 155 85 80 226

L. Gratuities

217 156 128 99

M. NL team, formerly the Colt '45s (2 wds)

198 179 212 86 105 137 113 150 189 41
 51 9 131

N. Wields the blue pencil

96 123 175 224 44

O. 1951 movie in which James Arness played the title role (2 wds)

26 196 64 34 42 1 20 203

P. Greeting for a tan bovine (2 wds)

63 109 5 201 98 195

Q. ____ of Court; small hotels

216 183 177 176

R. Pecan; bolt partner

180 165 208

S. See Word T

72 35 66 3 219 40

T. Crosswordist's favorite Mel Ott played with this team before it moved to the west (2 wds foll. by Word S)

21 79 53 61 161 28 104 87 43 164 140 221

U. Palindromic Vietnamese holiday

214 186 76

V. Member of an African tribe

171 60 47 145 136 107 69 197 148

W. The Icelandic letter ð

74 57 70

X. Jewish rabbinical seminary

169 71 37 48 45 205 121

Y. They play in Busch Memorial Stadium (3 wds)

18 100 68 160 138 204 132 77 15 149

8 114 191 218 88 101

Z. Formerly, the Boston Bees (2 wds)

89 202 162 56 210 94 154 134 73 106

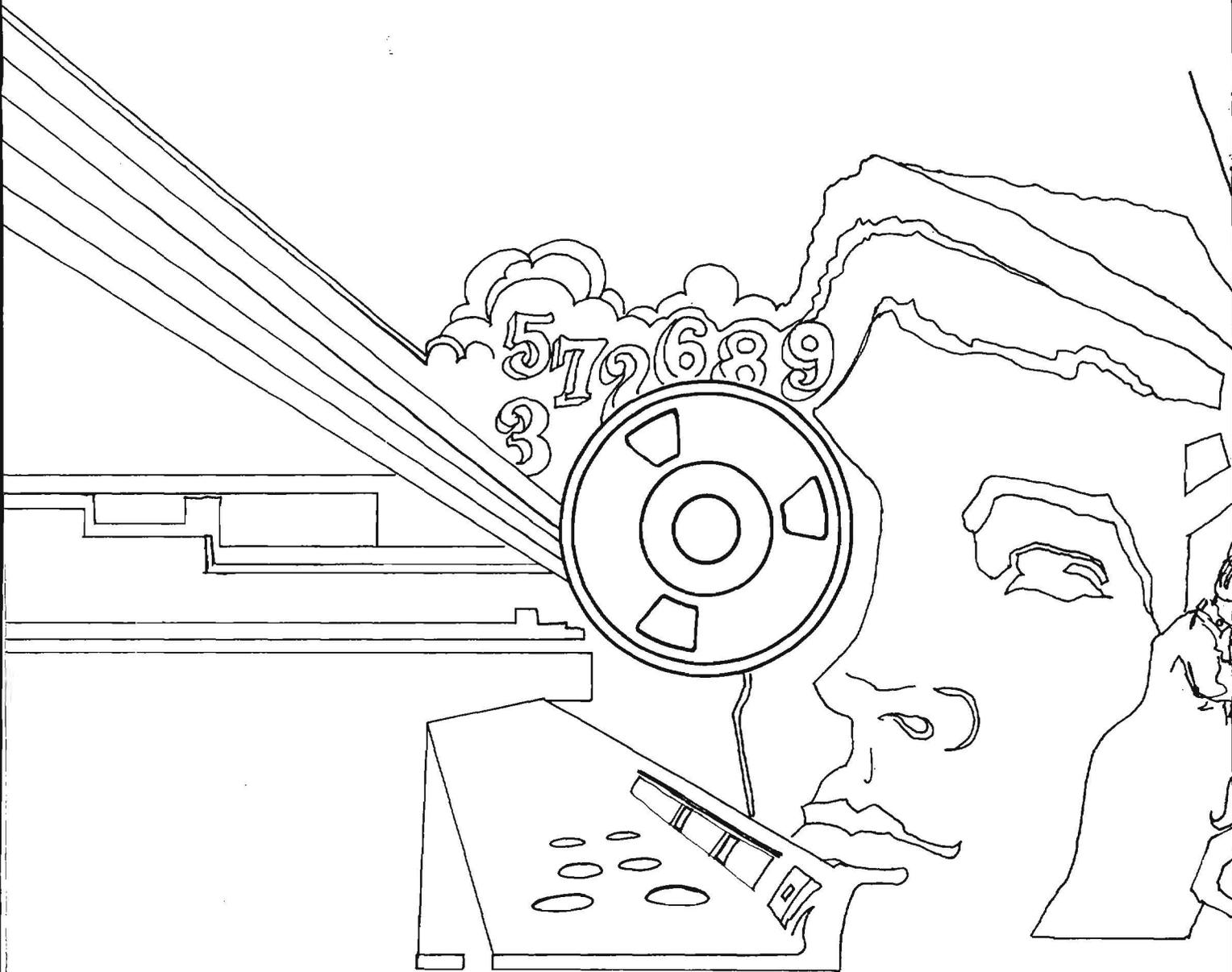
115 223 193

a. Yeast (arch., var.)

39 147 46 36

13	A		14	D	15	Y	16	F	17	H		18	Y	19	A	20	O	21	T	22	H		23	F	24	J	25	D		26	O	27	B		
28	T	29	A	30	J		31	F	32	K	33	B	34	O		35	S	36	a		37	X	38	B	39	a	40	S		41	M	42	O		
43	T	44	N		45	X	46	a		47	V	48	X	49	G		50	A	51	M	52	F	53	T	54	C	55	B	56	Z	57	W	58	H	
59	D		60	V	61	T		62	A	63	P	64	O	65	K		66	S	67	I	68	Y		69	V	70	W	71	X		72	S			
73	Z	74	W	75	H	76	U		77	Y	78	H	79	T	80	K	81	A	82	F	83	B		84	A	85	K	86	M	87	T	88	Y	89	Z
90	B	91	C	92	F	93	G		94	Z	95	J	96	N		97	F	98	P	99	L	100	Y		101	Y	102	J	103	B	104	T	105	M	
106	Z	107	V	108	D	109	P	110	K	111	F		112	C	113	M	114	Y	115	Z	116	A	117	F	118	J	119	K	120	B		121	X	122	D
123	N		124	G	125	A	126	C	127	F	128	L	129	K	130	D	131	M	132	Y	133	I	134	Z	135	B	136	V		137	M	138	Y	139	B
140	T	141	F	142	C		143	Y	144	C		145	V	146	D	147	a		148	V	149	Y	150	M	151	D	152	B	153	F	154	Z	155	K	
156	L	157	C	158	H		159	F	160	Y	161	T	162	Z	163	H		164	T	165	R	166	A	167	B	168	H	169	X		170	B	171	V	
172	J	173	H	174	C		175	N	176	Q		177	Q	178	D		179	M	180	R	181	J		182	E	183	Q		184	I	185	G			
186	U		187	E	188	F	189	M	190	A	191	Y	192	K	193	Z	194	H		195	P	196	O	197	V		198	M	199	B	200	E	201	P	
202	Z		203	O	204	Y	205	X	206	F	207	H		208	R	209	A	210	Z	211	H	212	M	213	F		214	U	215	H		216	Q		
217	L		218	Y	219	S		220	H	221	T	222	I	223	Z		224	N	225	A	226	K	227	H		dhw									

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