

~~TOP SECRET~~

NATIONAL SECURITY AGENCY
FORT GEORGE G. MEADE, MARYLAND

CRYPTOLOG

AUGUST 1977



WHAT IS AN INFORMATION RESEARCH ANALYST?.....	[REDACTED].....	1
"DIALOG" AVAILABLE AT N.S.A.....	2
LET ME REPEAT AND MAKE MYSELF CLEAR... Peter Jenks.....	3
POSTSCRIPT TO "DATING GAME".....	[REDACTED].....	5
NEW DIRECTIONS IN INTELLIGENCE COMMUNITY David W. Gaddy.....	6
EARLY DAYS IN N.S.A. COMPUTING.....	[REDACTED].....	8
TELLING IT LIKE IT IS.....	Ramon A. Santiago-Ortiz.....	11
EXPLETIVES DELETED?.....	A. J. Salemme.....	13
WHAT ARE THEY UP TO ANYWAY?.....	[REDACTED].....	20
LETTERS TO THE EDITOR.....	21

P.L. 86-36

~~THIS DOCUMENT CONTAINS CODEWORD MATERIAL~~

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WHAT IS AN INFORMATION RESEARCH ANALYST?

T12

"*I*nformation Science is concerned with the recognition, acquisition, orderly storage, maintenance, retrieval, and dissemination of information, data or materials, in support of NSA/CSS analytic and research functions. Information Science is interdisciplinary in nature and draws upon computer science, library science, documentation and other technologies for theory and methods." This quote was taken from the Information Science Intern Manual.

The field of Information Science has not been effectively introduced to NSA/CSS. Certainly this is partially attributable to the lack of a conclusive, widely-known explanation of the discipline. At present, T12 is the only

NSA organization which seeks to train such analysts. This restrictive compartmentalization is shortchanging the Agency. It is time to recognize the skills of Information Science Analysts (ISAs) as skills of potential benefit to all organizations.

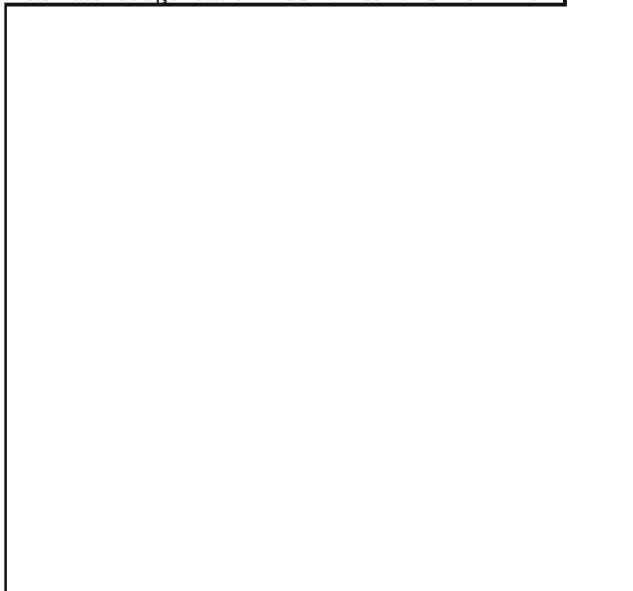
T12 can and does provide a valuable service to NSA, but it is not used to its greatest potential. Perhaps this is because the services are not advertised enough or that experience has been that the wrong services have been offered. The reaction on the part of the users seems to be to give up. A more productive approach by customers might result in better experiences in the future. Since T12 is a service organization, suggestions by other organizations would be

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welcomed readily and, if feasible, could be instituted.

All organizations should take another look at Information Science Analysts and note the skills and knowledge that well-trained ISAs have.



If that analyst or those offices had an experienced ISA to turn to for help -- right in the same office -- product might improve, and experience with and services from T12 might also improve.

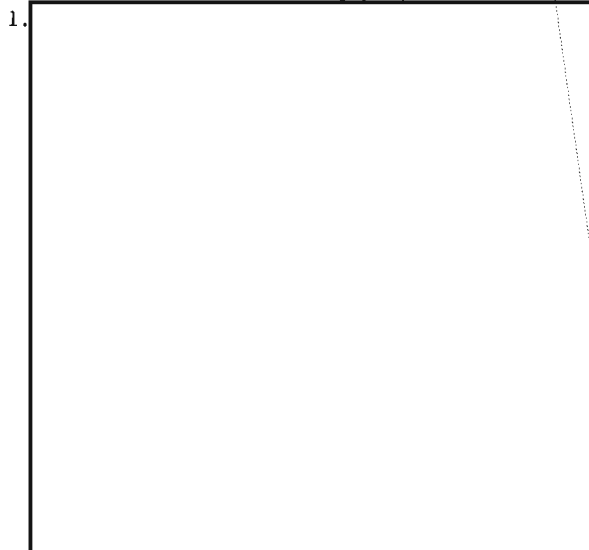
Often, analysts are unsure of whom to consult or even if anyone should be consulted on a particular problem. The in-office ISA could, at least, direct the questioning analyst to the correct T12 service.

Many organizations do long-term research projects and have Special Research Analysts (SRAs) working on them. However, it is my understanding that SRAs are to do day-to-day research and reporting, while ISAs should research the long-term or new efforts. Perhaps a pool of ISAs could be organized for temporary loan to offices for such projects. In fact, such is the situation with IS interns in many

cases. Why not continue this practice, extending it to professionalized analysts?

Although I am an intern and my judgment is certainly biased, I think that the IS interns have already proved my point. When interns go into non-T12 elements and work alongside other analysts, they see how much people do not know about T12's services. They also see where T12 is lacking. The interchange between the interns and their parent organization, T12, is an excellent way to encourage changes which will improve the information services at NSA. A pool of ISAs might enhance the possibilities for continued interchange.

Thus, I make the following proposals:



- 1.
2. T12 should investigate the possibility of establishing a pool of ISAs who can be loaned on a temporary basis to those organizations needing such service.
3. Non-T12 offices should investigate the need for full-time ISAs and include them in their next budget requirements.

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DIALOG Available at NSA



DIALOG, the on-line data system shown in the illustration on page 1, is one of the newest systems serving the information needs of NSA analysts. The system provides access to more than 40 open-literature data bases dealing with science, technology, business/economics, and the social sciences. Individual files include biology,

chemistry, meteorology, oceanography, physics, agriculture, international business forecasts, electronic data processing, patents, computers, energy, metals, education, psychology, etc.

Thousands of periodicals are indexed, ready to help solve your information needs.

To make use of the DIALOG system, and for other information service, call or visit the following organizations:

<u>Organization</u>	<u>Room</u>	<u>Telephone</u>
T1213	2N090	5759s
T1222	2C053	3258s
T1222	2E029	3189s

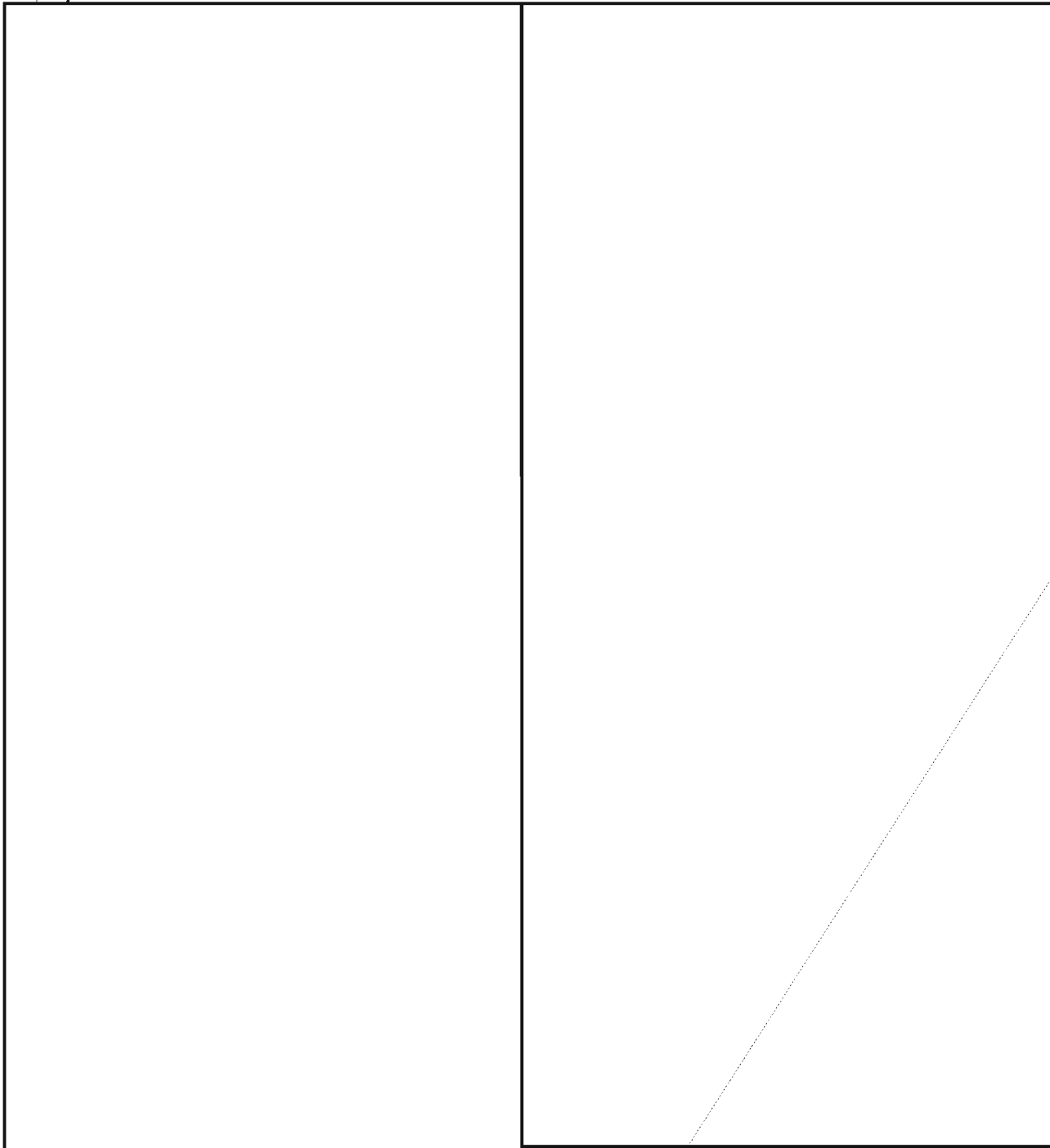
(U)

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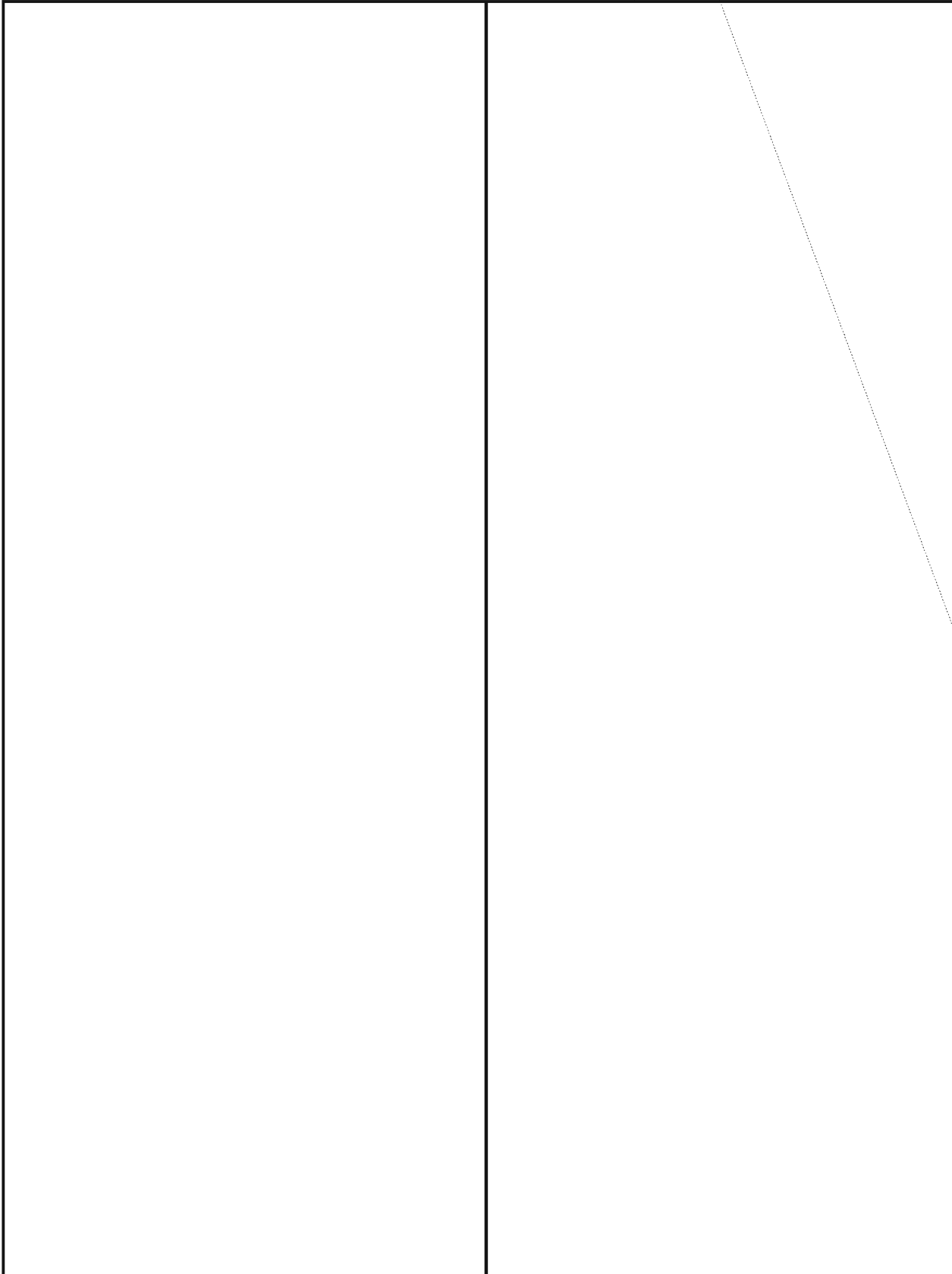
LET ME REPEAT -
(I say, let me repeat)
AND MAKE MYSELF
PERFECTLY CLEAR



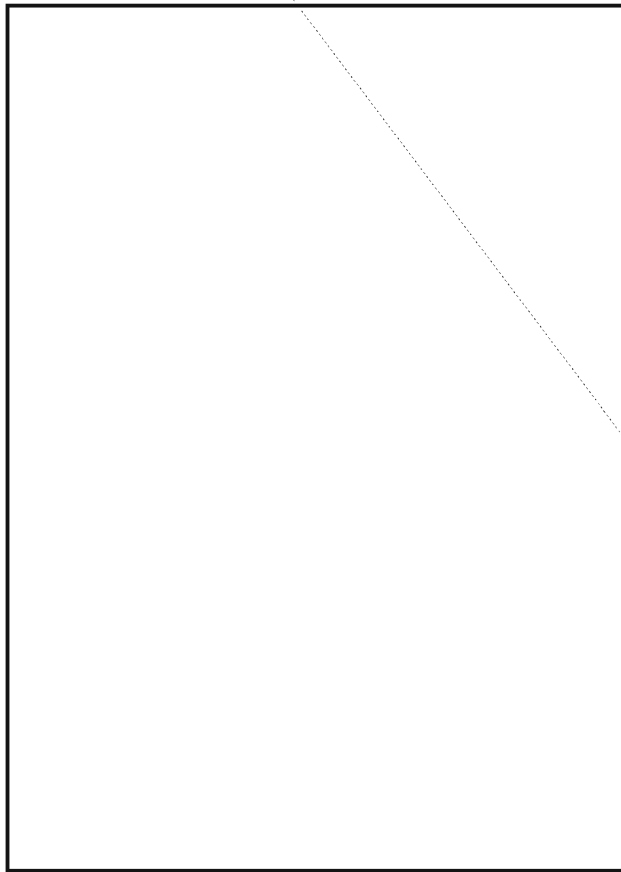
Peter Jenks, G



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POSTSCRIPT TO "DATING GAME"

P.L. 86-36



R51

It's hard to take exception to a formula as simple as $Y + L + M + D = N$. One can, and I will, add a few complications.

A note at the end of Dave Williams' article, "Dating Game" (CRYPTOLOG, July 1977) specifies: "For dates in the twenty-first century, subtract one from N; for those in the nineteenth century, add 2."

To subsume these two apparently ad-hoc directives under a general rule, valid for all centuries (after the sixteenth, when the calendar reform went into effect): Let C be the first two digits of the year (i.e., the century digits, but, numerically, one smaller, since we are now in the twentieth century, although $C = 19$). Like L (Williams' leap-year factor), let $F = \frac{C}{4}$ (ignoring any remainder). Then, the "century correction" to the Williams formula is to add to his N (before finding the remainder after division by 7) the terms

$$F - 2C + 34$$

(or, alternatively, $F - 2C - 1$).

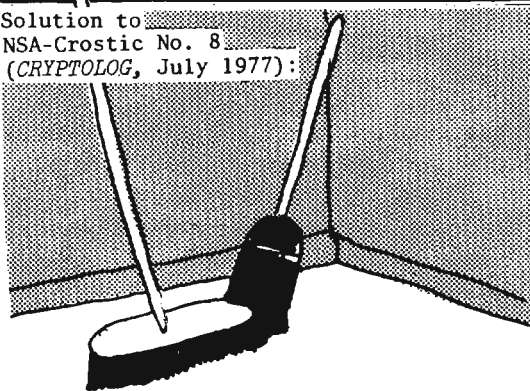
For the nineteenth, twentieth, and twenty-first centuries, the century correction, in tabular form, is:

Century	C	F	$F - 2C + 34$
19	18	4	+2
20	19	4	0
21	20	5	-1

Thus, the "ad-hoc" directives aren't all that ad-hoc. A more detailed treatment can be found on page 209 of *Elementary Number Theory*, Uspensky and Heaslet, Mc-Graw-Hill, New York, 1939 (available in NSA Library, call numbers QA241. Us6).

(UNCLASSIFIED)

Solution to NSA-Croctic No. 8 (CRYPTOLOG, July 1977):



"Stop the Presses!", NSA Technical Journal, Vol. XXI, No. 1 (Twentieth Anniversary Issue), Winter 1976.

"Many [codewords are] vague enough to leave doubt as to their precise interpretation. [One officer told me], "I got a message which directed me to get ready for Operation CLEAN SWEEP. I didn't know whether to run for the broom closet or pack my bags in anticipation of being reassigned."

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NEW DIRECTIONS FOR THE U.S. INTELLIGENCE COMMUNITY



David W. Gaddy, D5



Reprinted from *Field Information Letter* 4-77, April 1977 with the kind permission of its editor, William Hunt

One of the Inaugural Day acts of the Carter administration was the announcement of a reorganization of the National Security Council. Reflecting the personal touch of the new President, the change was "to place more responsibility in the departments and agencies while assuring that the National Security Council (NSC), with [the] Assistant [to the President] for National Security Affairs, continues to integrate and facilitate foreign and defense policy decisions"¹. Participation at appropriate NSC meetings was broadened, yet a more flexible concept was evident. The Carter NSC was to be more a mechanism than a structure, a facilitating mechanism to assist the President in analyzing and reaching decisions in matters of foreign, domestic, and intelligence policy.

The concept is most evident in the establishment of just two basic NSC committees, through which all work is to be done:

¹Presidential Directive/NSC-2, 20 January 1977. PD/NSC-1, also dated 20 January 1977, established the Presidential Directive and the Presidential Review Memorandum (PRM) as instrumentalities to direct the work of the NSC and participating agencies, and to inform the departments and agencies of Presidential directives. They replace the National Security Study Memoranda (NSSM)/National Security Decision Memoranda (NSDM) of the Kissinger era. The PRM series directs that reviews and analyses be undertaken on subjects of interest to the President.

- the Policy Review Committee (PRC), and
- the Special Coordination Committee (SCC).

Chairmanship of the PRC is designated for each meeting, depending on the subject matter being considered; the Assistant for National Security Affairs (Mr. Brzezinski) chairs the SCC. Both committees are of concern to us. Both impact on the organizational structure announced by President Ford in EO 11905².

The PRC is "to develop national security policy for Presidential decision in those cases where the basic responsibilities fall primarily within a given department but where the subject also has important implications for other departments and agencies." Examples are:

- foreign policy issues with significant military or other interagency aspects;
- defense policy issues with international implications;
- coordination of the annual Defense budget with foreign policy objectives;
- preparation of a consolidated national intelligence budget and resource allocation for the Intelligence Community; and
- international economic issues pertinent to U.S. foreign policy and security.

The intelligence function of the PRC thus replaced that of the Committee on Foreign Intelligence (CFI) under EO 11905. True to the "flexible mechanism" idea, when the PRC is performing in the "CFI-like" role, the Director of Central Intelligence (DCI) chairs, and staff support

²See "Reorganization of United States Intelligence," *Field Information Letter* 8-76, August 1976, pp. 4-8.

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EO 1.4.(c)
P.L. 86-36

(especially of the program and budget sort) is provided by the Intelligence Community Staff (ICS). PRC(I) is the shorthand acronym.

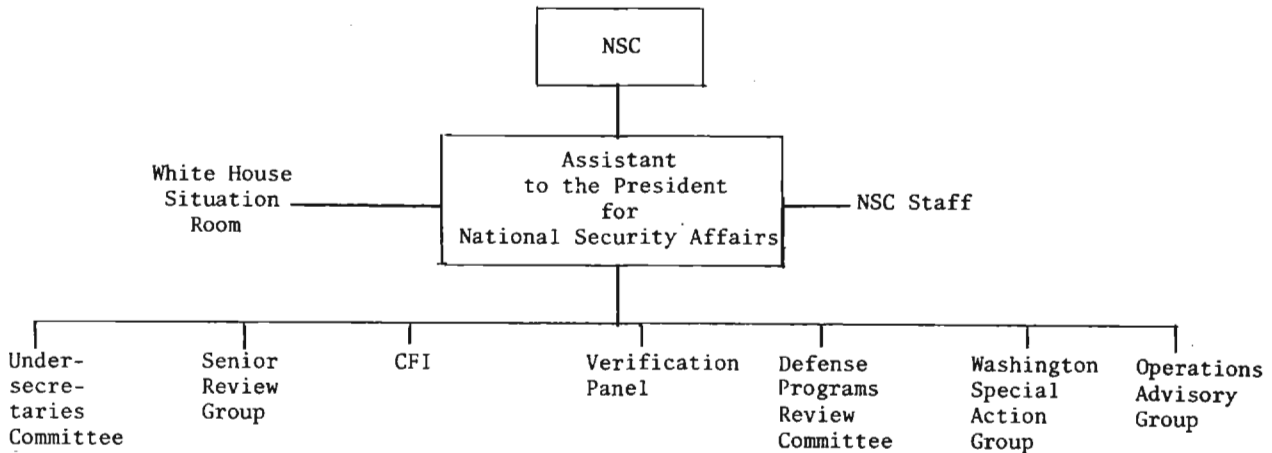
The Intelligence Research and Development Council, shifted from IRAC (the former Intelligence Resources Advisory Committee, the resource counterpart of USIB, the intelligence board) to CFI last go-round, has been re-subordinated to the PRC(I).

The SCC deals with special cross-cutting issues requiring coordination in the development of options and the implementation of Presidential decisions. This includes such items as oversight of sensitive intelligence activities, arms control evaluation, and assistance to the President in crisis management.

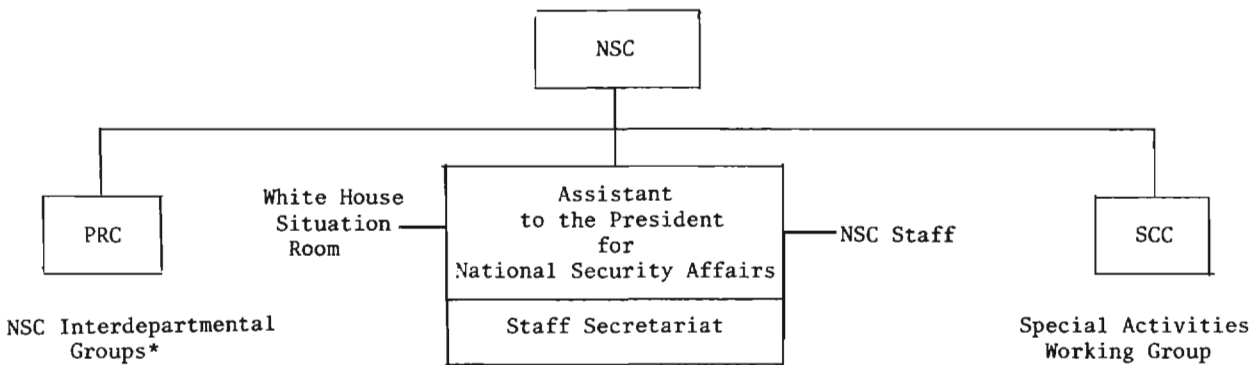
What does all this portend for the substructure? It's too early to tell, but we shouldn't have to wait long. A full-scale "comprehensive review of major foreign intelligence activities and the organizational structure and functioning of the Intelligence Community" has been directed of the SCC by the President in his PRM/NSC-11 of 22 February 1977. Among other considerations, it will specifically address EO 11905 and the interrelationships among the various intelligence agencies. It had a "due date" of June 1977. The Senate, Select Committee has a special interest in the matter of legislative charters. Therefore, Congress will be watching the outcome closely, as will we all.



NSC STRUCTURE (Old)



NSC STRUCTURE (New)

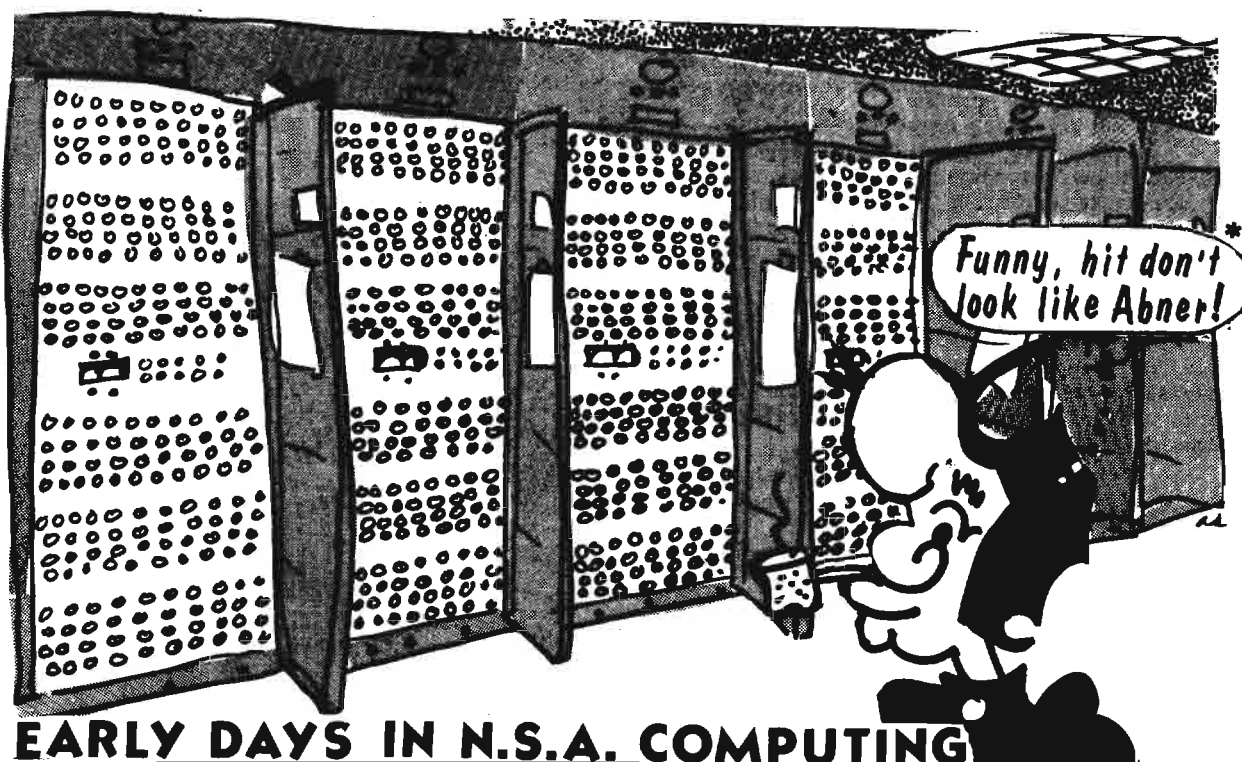


*The five regional and one Politico-Military interdepartmental groups are carry-overs, expected to change. The NSC staff is organized on a regional/functional basis.



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EARLY DAYS IN N.S.A. COMPUTING

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P.L. 86-36

Before the first generation of modern computers became a reality, NSA (even in the fragmented form of early years before officially constituted as such in 1952) realized the enormous possibilities of these devices. No satisfactory model being commercially available, not even from IBM, our staff of engineers at Arlington Hall Station proceeded in 1950 to design and build a computer tailored for NSA problems. This device, which became known as ABNER, was our first real computer, the first means we had, other than such things as primitive IBM card-sorting devices, of relieving analysts from the drudgery of repetitive pencil and paper trials. ABNER's genesis and construction owed much to the abilities of [redacted] of R&D.

The ABNER machine consisted of four logical units with electronic circuitry capable of carrying out arithmetic, control, analytical, and input-output functions, connected to a memory device holding 1024 48-bit words. This memory took the physical form of 128 tubes filled with mercury, each tube equipped at one end with a sound-pulse generator and at the other with a read-out gate which transformed the sound pulses back to electrical signals.

When in operation, each tube contained a train of 334 sound or no-sound pulses, representing the binary digits 1 and 0 in eight computer words of 45 bits apiece, with an additional 3 bits for synchronization. Once a word was read out at the gate, it was immediately available for interpretation by one of the logical units.

Either in its original form, or as altered by a logical unit, the word was then sent back to the other end of its tube and once more converted to a train of sound pulses. While traveling through the tube in this form, the word was unavailable for any purpose, and if it was called for by the program during this interval, the computer had to wait until it arrived at the read-out gate. A good deal of the programmer's time was therefore devoted to planning an arrangement of the program orders and the data so that this delay time would be minimized in the execution of the program. This delay time could be anything from 0 to 7 cycles. An ABNER cycle consisted of 48 microseconds.

The first 5 bits of a word defined one of the 32 basic ABNER Operations when the word was interpreted as an Instruction. The succeeding four 10-bit segments were called the α , β , γ , δ ("alpha," "beta," "gamma," "delta") addresses. In the generalized form of an ABNER operation, the machine sent words α and β to the Arithmetic Unit, performed the indicated Operation, stored the result in word γ , and took the next Instruction from word δ .

The power and versatility of ABNER were considerably enhanced by a number of deviations

* Wal, hit is! See: *History of NSA General-Purpose Electronic Digital Computers*, by Samuel S. Snyder, Monograph No. 2, NSA Technical Literature Series, 1964 (S-CCO).

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P.L. 86-36
EO 1.4.(c)

from the above scheme which permitted an effective use of more than 32 Operations. Certain of the Operations utilized the α bits to expand the Instruction code. Five analytical orders provided a "Beta Prime" feature whereby an order could be set up to refer to two operands, one at the given β address, the other at the β address plus 512 (mod 1024). An auxiliary order D used before certain other orders modified their functions. It was possible to hold one operand during repetition, or to define any two streams of pentabits as operands in a repetitive process. This facilitated sliding messages against each other in search of depths created by reuse of keys, which was quite a common phenomenon in those relatively innocent days of long ago.

In the four logical units of the ABNER computer, a word was interpreted differently, as follows:

<i>In the</i>	<i>Interpreted as</i>	
Arithmetic unit	a number	bits 2^4 to 2^0 plus sign
Control unit	an order	$\delta \gamma \beta \alpha$ OP
Analytical unit	pentabits	eight 5-bit words (5 bits not used)
Input-output unit	characters	nine 5-bit characters

This versatility of interpretation gave ABNER a more powerful computing ability than the modern programmer would assume from its modest memory and limited number of orders.

ABNER was designed to have magnetic tapes, punched cards, paper tape, and an IBM CXCO-1 typewriter as input/output media. In my experience, the latter two were the most widely used. When it proved necessary to write a program which could not fit into the available memory, it often proved practical to organize the job in what we would now call modules, so that after module 1 completed its task, results could be outputted or stored in a small part of the memory, and module 2 could be read in from paper tape, destroying module 1 and data no longer required. In this manner, several steps could be carried out serially, circumventing to a degree the memory limitations.

In the early use of ABNER, pioneer programmers such as [redacted] contributed to the development of the diagnostic programs grouped under the name STETHOSCOPE. These were forerunners of the RYE programs developed much later; these RYE programs remain available today.

As an example of the excellence of ABNER's logical design, consider the P order, nicknamed "Swish." In one operation "Swish" lined up two streams of pentabits, and returned a count of hits, accomplishing thereby what even today takes several orders to do. Modern computers are not logically superior to ABNER: they have merely benefitted from staggering advances in electronic technology. The logical organization

of ABNER was not only well in advance of its own era, but in some respects has yet to be equaled by any present computer.

Very few examples of ABNER programs survive today.

Four other programmers, all individually brighter than myself, had been assigned to do this job as a team. Each said his or her part was OK, but when the four parts were put on ABNER at the same time, distressing things occurred and no solutions appeared. Each was therefore convinced that one of the other three was sadly in error, and an impasse developed. At this point I was called in to give it a try.

In those long-departed days it was considered that analysts should do the thinking, and programmers should do what they were told. So the analyst [redacted] explained to me in great detail the method of attack. It all seemed very clever and complicated, but as a simple-minded person I couldn't help feeling there was an easier way. (As one detail, in recovering a fractionation of the cipher, they tested for an excess of 7s by carefully counting all 10 digits before making the calculation; I merely counted 7s, and not -7s.) With the advantage of a simplified approach and the fact that -- in contrast to the team of four -- my right hand did know what my left hand was doing, I was able to make the VITAMIN program work. This was beneficial to the Agency (and to my career therein), but I don't know that the team of four was altogether ecstatic.

In my opinion, a difficult problem can be effectively tackled by a team of two programmers. It is becoming less and less efficient to add more programmers to the team. Two will correct each other's errors on a reciprocal basis and the project will move ahead smoothly. With more people involved, more anxiety enters the picture. The individual programmer doesn't want to be lost in the crowd and becomes increasingly reluctant to take or give useful criticism. I once knew a programmer who had been hunting for a bug for several days. One day I stopped by his desk to talk about something else and, while waiting for his return, glanced at his program lying face up on his desk. I noticed a certain irregularity in one routine that didn't seem to look right, and on his return asked about it. A great light dawned on him. Yet, ever thereafter, when he saw me coming or he left his desk, he would carefully turn his program sheets face down.

P.L. 86-36

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Another programmer, finally baffled, asked me to look for a bug. Being familiar with all kinds (must I admit, through having made them myself?), I quickly found in 5 minutes of search the places where arabic 1 had been punched instead of Roman I, which proved indeed to be her trouble. She was stunned that I found the errors so quickly, thanked me faintly, and never asked for my help again! So I think, in the education of programmers, egoless programming is the most important single thing to learn.

Returning to ABNER, it seems fitting to mention that in those days the engineers kept the machine working. The programmers were the operators. You had to know what all the buttons did, and take complete responsibility for loading and running your own program -- there was no one to do it for you.

The decision to move from Arlington Hall to Fort Meade was doom for ABNER. A one-of-a-kind machine, it was never intended to be moved and was not. At the Fort Meade site, the engineers worked on ABNER Model 2 which utilized quartz instead of mercury pools as a medium for the sound pulses. In a technical sense they were successful. Given perfect conditions, ABNER-2 would work. However, the quartz medium was sensitive to minuscule changes in temperature and humidity and was never as reliable as the pools of mercury in ABNER-1's tubes. Then too, advances in electronic technology made the whole concept of sound pulses and 48-microsecond cycles seem quaint and out of date, so ABNER-2 was dismantled and the ABNER concept passed into history.

The arrival of the IBM 701 computer at Arlington Hall, some time before the 1955 move to Fort Meade, brought us into contact with the first generation of commercial computer devices. Navy Lieutenant [redacted] (I hope he has since made admiral) became our outstanding expert on

this device, which modern programmers would also consider impossibly quaint. The magnetic tapes did work, but they were not physically strong enough to hold up well. One program I wrote prepared a difference book for use in depth-readings, but it was about a 50-50 proposition as to whether or not the magnetic tape used would break before the run was completed.

A more provoking feature of the 701 for many programmers was the necessity of programming card input-output through the formation of a "card image" in the machine. For the 12 rows of a card to be read, it was necessary to program 12 pairs of Left Copy and Right Copy orders, given at specified time intervals, to copy the left and right halves of the 12 rows of a card into 24 computer words. The information then required an additional routine to convert the punches (binary 1) and blanks (binary 0) into characters or numbers. To output anything, a similar process was needed in reverse. [redacted] and I did a brisk business for a while preparing input/output routines for programmers who found the whole process discouraging. Of course, all programming was in machine language -- if 04 was the ADD order, you punched 04 and not ADD. No one had heard of FORTRAN as yet, and, as with ABNER, if you wanted to run your program, you became the operator in order to do so.

For all its primitive features, the 701 still represented a quantum jump in analytical capacity, and, as everyone knows by now, was followed by the 704, 709, 7090, and the latest 360 and 370 models, with all the associated software and a babel of "higher-level" languages such as FORTRAN, COBOL, ALGOL, PL/1, and the like. No future programmers will ever know what the early days were like. Yet something may still be gleaned from a glimpse of the pioneers and their problems.

P.L. 86-36

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From: *History of NSA General-Purpose Electronic Digital Computers*,
by Samuel S. Snyder

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delay lines in the memory was always extremely critical, and the instruments used for measurement and regulation were inadequate. Also, the input-output equipment (IBM collator, Remington-Rand printer, electric typewriter, and Raytheon magnetic-tape drives) were often out of operation; and computation was ineffective or erroneous when input-output errors arose.

However, ABNER design and construction laid the foundation for many important later developments. ABNER was among the first computers in the country to operate successfully magnetic tapes simultaneously with internal computation. Its analytic instructions and other unique features made it extremely efficient for many cryptologic applications. Its Swish instruction was a model for planning DELLA, CICERO, and several other specially-designed equipments in the cryptologic arsenal and was a forerunner of the HARVEST Streaming units. Many programs made good use of the magnetic-tape capabilities, as well as the analytic instructions.

ABNER, Serial 1, cost approximately \$600,000. It contained 1500 tubes and 25,000 diodes. ABNER, Serial 2, cost about \$750,000.

(SCCO)

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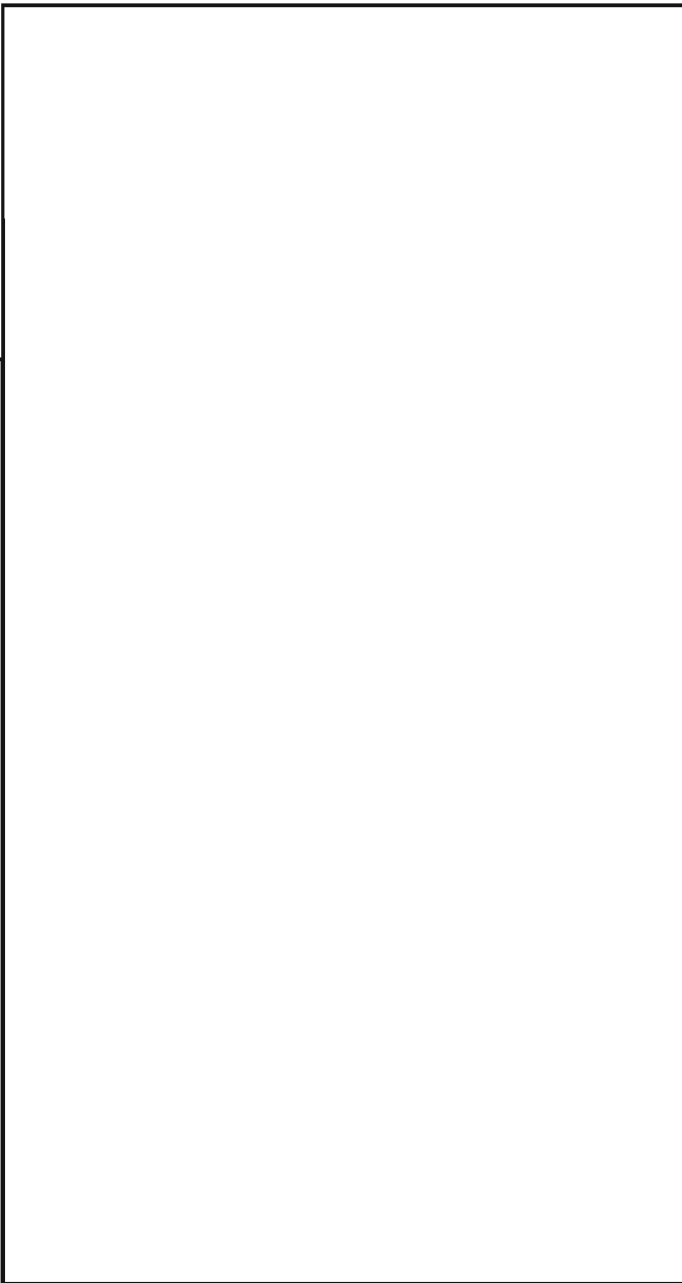
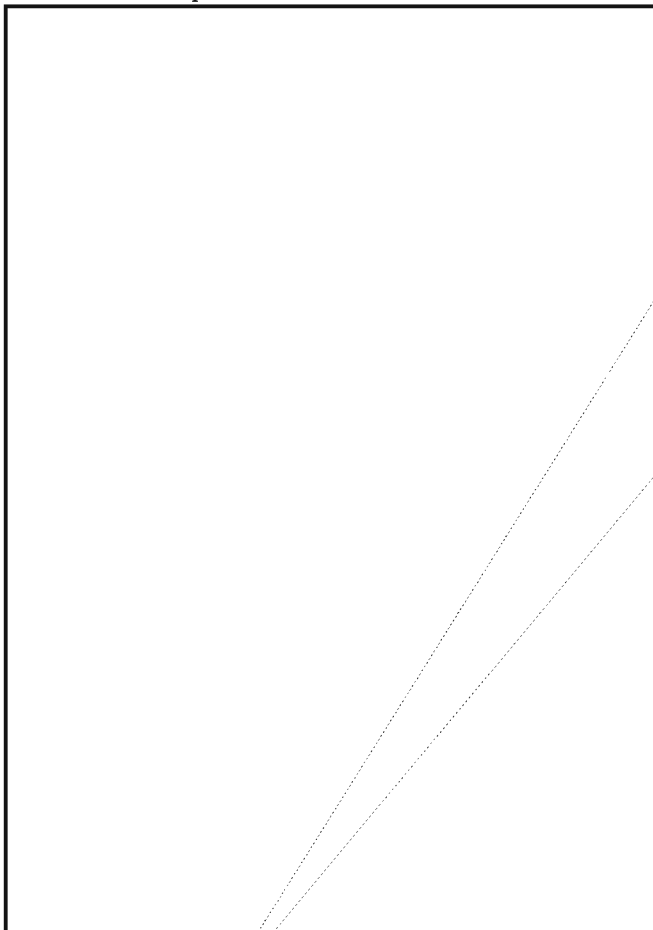
TELLING IT LIKE IT IS

**A CRYPTOLOG Interview
with
Ramon A. Santiago-Ortiz.
G612**



Mary Ann Harrison tells us that you telephoned her recently to tell her how much you liked her article, "Why Are These People Smiling?", in the May 1977 CRYPTOLOG. She said that your remarks about the status of the Spanish native linguist at NSA deserve much broader dissemination. Would you be willing to share some of your views with CRYPTOLOG readers?

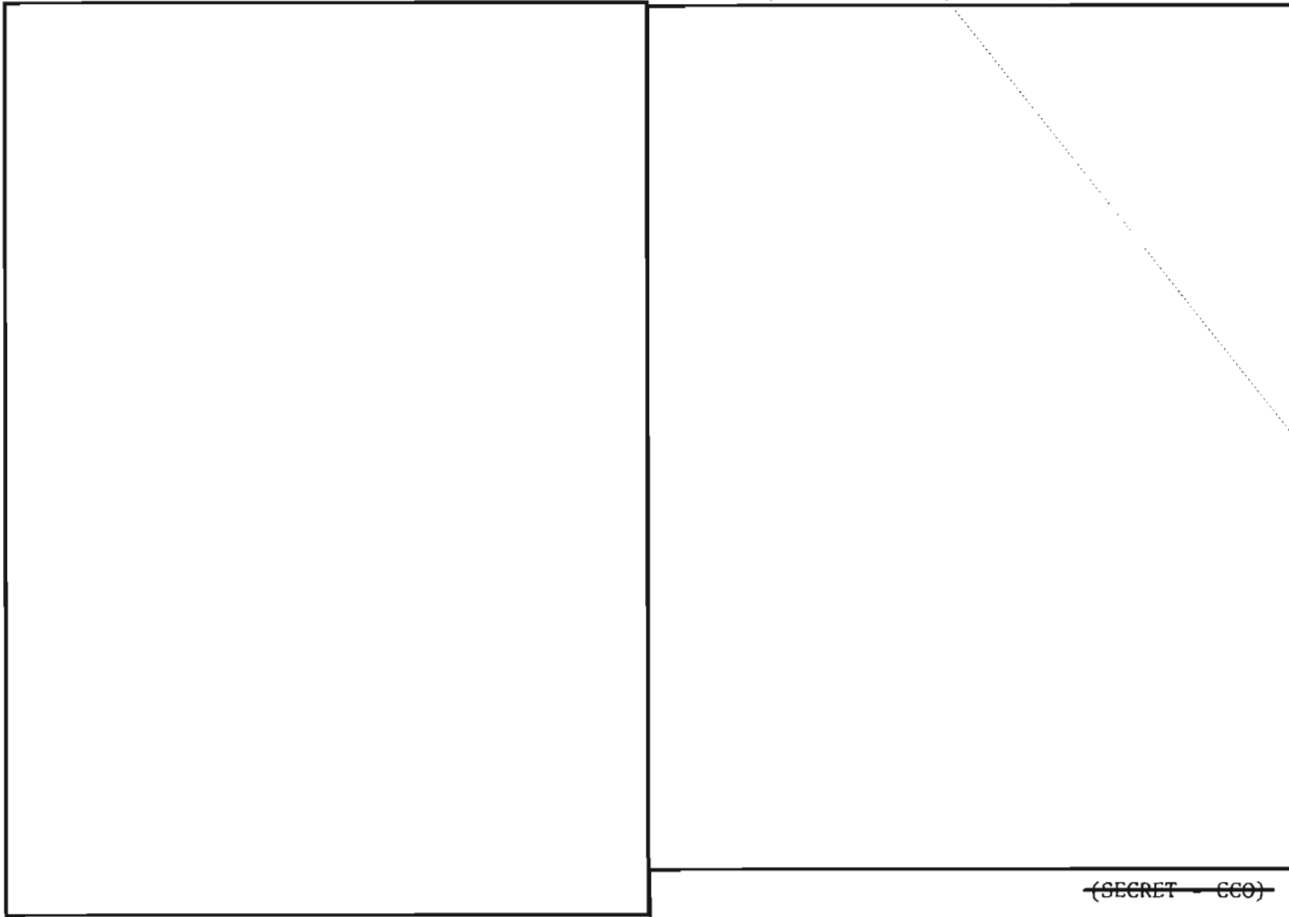
Certainly! The situation that I mentioned to Ms. Harrison has been building up for several years, and I feel that now might be a good time to bring it to the attention of people who might be able to improve it.



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Want to Play with a Pickfair Square?

The following letter appeared in the June 19, 1977 edition of Potomac Magazine (*The Washington Post*):

Cryptographic Challenge

Recent correspondence concerning the cryptogram inspires this letter. Your readers obviously work at it.

In gathering research for a book I am writing on Douglas Fairbanks and Mary Pickford, I came across a coded message sent to Douglas Fairbanks by his brother, Robert. The few cryptographers I know have been unable to solve it. Naturally, I'd love to know what it says. The word "Wycoff" may possibly appear; it was the

brothers' code word for Sylvia, Lady Ashley, with whom Fairbanks was involved at the time. The message, dated June 23, 1933, follows:

HPRIHTOPRT
IERGAGUISN PRNSYCANOH
AIEACFYCHI URDOKWLTWH
ERGCGLIDUOUNIHIWNOYY
IPTNRAYENSYPERE V (perhaps U) ANR (no spaces in this line—all run together)
WOFERAUTTU CTIONS
ROBERT

Boeton Herndon,
Charlottesville, Virginia

The next day our Cryptanalysis editor received the following solution from

G54:

P.L. 86-36

Inscribe the first 100 letters in a 10x10 matrix in columns from left to right:

H									
P									
R									
I									
H									

Then pull off letters diagonally, starting in upper left-hand corner:

Note that the questioned letter is actually a V, but there are two other garbles.

P.S. PICKFAIR in the message refers to the Hollywood estate of Mary Pickford and Douglas Fairbanks.

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EXPLETIVES DELETED? HOW TO HANDLE OBSCENITIES IN FOREIGN TEXT

A. J. Salemme, P16

Edited version of a talk given in March 1977 for CLA's Special Interest Group on Translation

Explanatory note: The word bleep in the following text does not indicate that certain words were originally spoken but are now deemed to be unprintable. No! The words were never uttered! On each occurrence, a 30x40" posterboard with that word was held in front of the speaker's face. As for what he thought. . .

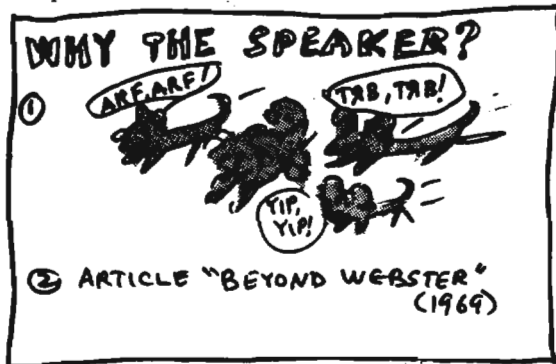
I'm completely aware that half of you people have looked at your watch and are wondering how long it will be before I actually come out and say **bleep!** so let's get it over with! (Slide 1).



Slide 1

Yes, SIGTRAN has another speaker. But the question might be, "Why the topic?" Well, this is the way the situation developed. The CLA lecture committee had another topic, and a speaker lined up, and the posters were all made up too. The lecture was called "The Flyaway Linguist." Well, he done flew away! When one of the members of the SIGTRAN lecture committee heard that, he said something like, well, "Oh **bleep!**" Someone else present said, "Say, that would be a good idea for a talk!"

And so, once they got the idea for the talk, the speaker was obvious (Slide 2), because,



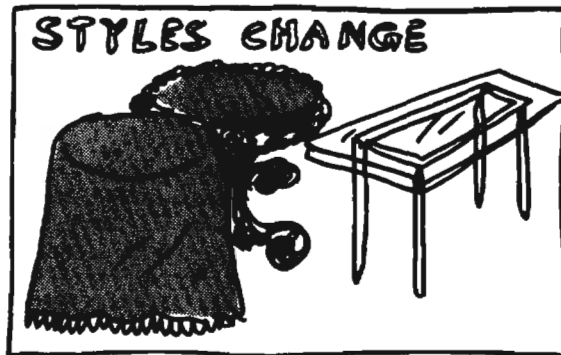
Slide 2

although I don't really have a reputation as bad as Typhoid Mary of the lecture series, if you see my name on a poster as the person who is going to be giving a lecture, you can be pretty sure that the good speaker, the one

who's going to get paid a fee, who's actually prepared a *written* text and dry-ran it (dry-ran it?), has suddenly got sick or is out of the country and good old Art is like the guy with the trained dog act in the circus who waits for the aerialist to miss the net, whereupon the cry goes out, "Bring 'em out!" So here I am! In a way, I'm also like Ferdinand de Lesseps, the creator of the Panama Canal. You know the palindrome "A man, a plan, a canal -- Panama!" (It reads the same backwards.) I tried to work one out for me too, but the best I could do was "Emmelas -- ecneidua na, cipot a!" It doesn't read as well frontwards, but the idea is there.

I had another reason to be considered, because several years ago I wrote an article for what we could call a sister agency's publication. The article was on this very topic of -- well, some people call them "dirty words," but I call them "unconventional words." In fact, when I heard that the topic was chosen for the talk, I at first thought that Mrs. Kenny was going to give the talk, so I gave her a copy of that article, "Beyond Webster's and All That: Dictionaries of Unconventional Language," to help her out. But she said, "No, Art, *you're* going to give it!" So here I stand.

Before discussing obscenities in foreign languages (Slide 3), we have to know what obscenities are, what nasty language is. Perhaps



Slide 3

a definition of "obscenity" would be fitting here? Well, if the Supreme Court couldn't do it, I'd have to be a pretty dumb **bleep!** to think that I could! Instead, I'm going to say, "You know what an obscenity is. You know what blasphemy is." Because, surprisingly enough, the very words that we use and -- oops! did I say "we"? I mean "you"! The very words that you use have been in the English language for

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many, many centuries. Since the words have been kicking around for so long, everyone knows them by now. But, as you know, styles change! And that includes styles in speech. People nowadays can come right out and say, loud and clear, words like **bleep!** And even print words like **bleep!** People can, not me! But, really, styles in language are similar to styles in anything. In clothing! The things I see on television, you wouldn't believe it! The things I see in furniture stores! Because you know that a table is a table. People have been making tables for hundreds of years. There's a basic concept for a table: it's a surface with legs on it. Now, if the Victorians wanted to clutter that all up with a lot of gingerbread carving and then cover the whole thing with a tablecloth, that didn't alter the fact that there really were legs under there. But the Victorians couldn't even *talk* about table legs. Because if they talked about table legs, that would make people think, "You must be thinking about human legs!" And if so. . . So the Victorians covered it up. With cloth. And their language covered it all up too. Well, we live different now. We live in the Age of Plastics, the Age of Glass. We don't want to cover the structure of what we're saying. So, if we feel like calling someone a dirty son of a -- oops! that was close! -- and then come out and say it. But a proviso, again -- *we don't, they do!*

There are many factors that influence the use of language. They include:

- *style,*
- *taboo and superstition,*
- *word magic,*
- *basic human meanness,*
- *etc.*

If Jackie O says, "Oh, stuff it!" then all her pals will say, "Oh, stuff it!" Just like the way that anyone who wanted to work with or for McNamara had to say "VEET Nam." If he said, "Vi-ET NAHM," he wouldn't have been "in." So language fashions come in and go out.

That applies too to nasty words. Especially since they are involved with word taboo and superstition. You can't say certain things! You can't say, "Oh, isn't that a cute baby!" because then his hair will fall out. Or if you say that you hope that something nasty will happen to someone, it will really happen. Word magic is very strong. But nevertheless the words stay in the language. Because people are people. Basically, they're no damned good! I mean, we're no damned good! So the words have been around for a long time and we use them whenever we feel like it. My wife has been telling my kids for a lifetime, "Well, your father uses those words because he's got a poor vocabulary." On the contrary! I know just when I want to use them. Yes, people are mean. They can remember them for a long time and then use them appropriately. All of you who have kids, maybe, 2, 3, 4, or 5 years old -- you know that if you say

one word once, in an odd moment, that kid will store it away and know exactly when to say it. It's when your mother-in-law is visiting. But why is what the kid says so nasty? It all depends on the society in which he lives. You've all heard about the family in a primitive society where the people wore no clothing whatsoever. The only adornment was the bone that married women wore through their nose. One day, seated around the campfire, the kid -- 12 or 13, say -- happened to notice anatomical differences. He tells Paw, "Hey, Paw, Maw don't have a . . ." So, Paw gave the kid the names of all the differences -- no problem! Then the kid said, "But, Paw, there's one thing I'm wondering about. What's that thing that Maw has through her nose?" Paw said, "Goddammit, kid, there are some things that decent people just don't talk about!"

Another example of a sociological aspect of language, and also of basic human meanness, is provided by last names. Most last names, in all languages, are based on the father's name, or the person's occupation, where he lives, how tall he is, etc. Smith, Kuznetsov, and Haddad are all the same name. Johnson, Ivanov, Johannson are the same. Little, Malenkov. . . Baker, Boulanger. . . But there are also, in all languages, names like Shitepoke. We know from history that, in societies where people didn't have last names, people's basic meanness came to the forefront when names were being assigned. Like in the Austro-Hungarian Empire in the time of Maria Theresa, when registry offices were set up to give every Jew a last name, like it or not. You could buy a good name, or, if not, well, your name might not be too appealing. H. L. Mencken mentions the story about the fellow who comes out of the registry office and tells his friend he was given the name "Schweisshund" (Bloodhound). "Why didn't you give him some money and get a good name?" "Are you kidding? It took every pfennig I had just to have him put the W in!"

And those of you who know Turkish know that the same situation prevailed in this very century, after Kemal Ataturk came to power. He said that people would have last names. "Live modern! Get a last name, just like the Europeans have!" And, once again, people got inferior names if they didn't come across with some money, or if they resisted the idea completely. Of course, in any country, then and now, it's possible to get court relief. In old Russia, if you didn't pay the registrar enough to get a good name, you could pay a judge 500 rubles and get it changed. If you got the name Durakov (son of a fool), you could get one letter changed -- Durasov. In old Russia they wouldn't let you change your name so drastically that it would seem that you were hiding from the authorities -- so, if your name were, say, Semizhopov, the best you could hope for was a reduction to, say, Pyatizhopov -- Seven-bottoms, changed to Five-bottoms. Russians really know

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how to change their names. A Soviet pilot defected in Japan several years ago. He's got the name Rastvorov. He wants to disguise his name, so he changes it to Rastovorov! But that's Russians! Americans have a more sensible attitude toward names. Oh yeah? A few months ago, an American judge refused to allow a woman to change her name legally from Cooperman to Cooperperson (see CRYPTOLOG, December 1976). He ruled that, "It would have serious repercussions perhaps throughout the entire country."

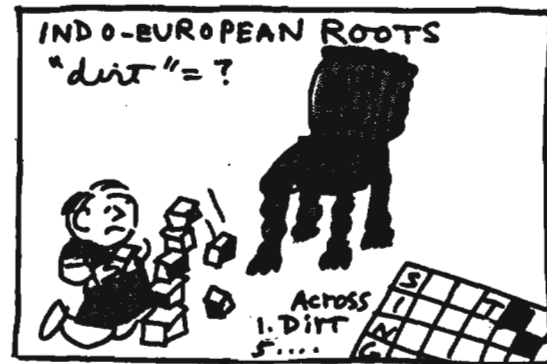
In addition to being mean, people are ingenious when it comes to language. If you want to say something nasty, but are afraid to, for fear of getting your mouth washed out with soap, you can say things like, "Jumping Jehosephat!", "Dad nabbit!", "Goldernit!", "Gee dee it!", "Heck!", "Sherbet!", and so on. You can even see these things in print. You can see or say the letters S.O.B., although you can't come out and say the words they stand for. But people know that, when you say "Sherbet!" you're really not thinking sherbet. The wife of a former carpool member of mine grew up in the Texas Bible Belt. Whenever she said, "Heck!", she'd get a good slap across the mouth and her mother would say, "You *said* one thing but you *thought* the other!"

And don't try to fool people! If you say one thing and think another, your listeners will know it. Several years ago my wife and I went on a guided bus tour to Pennsylvania Dutch country. The guide -- Miss Priss we called her -- worn white gloves, to show she was a lady. But she had the dirtiest mind. She made all kinds of funny references to placenames in Pennsylvania Dutch country. When people would sort of snicker, she'd say, "What's so funny? I don't even know what you're *talking* about. Because I'm not that kind of girl." Well, I thought she *was* that kind of a girl, and the white gloves didn't change it. So if I hear people snickering in my audience, I know that you know what I'm talking about, even if I don't come out and say it.

So you can use words that *almost* say it. You can say "Sherbet!" and no one will mind. Or "Phenobarbitol!" You can trick kids sometimes, when they're just starting to pick up nasty language (from the kids in the street!), by saying, "Well, I don't mind what you say, but don't say the worst word there is! No, I'm not going to tell you what it is, or you'll say it! Well, okay, you've wormed it out of me -- it's 'Phenobarbitol!'" So you can trick a kid for maybe a week, to think that that is really the worst possible cuss word. But if you still want to say something nasty, but don't want to fake it by words that sound sort of like it, there's something else you can do. You can use fancy language. English is unusual in that it is a Germanic language, with lots of French vocabu-

lary slapped onto it. Also we can use Latin or Greek when we want to sound extra fancy while saying everyday things. No doctor would say, "You have an infected toenail." That wouldn't be worth \$55. He's got a fancier name for it, and you'd better make sure you use it on your hospitalization form!

Thus, if you want to say something nasty, you don't have to use nasty Anglo-Saxon words. If a person does use those Anglo-Saxon words, you can say, "He uses scatological language." But is that any better than using the ordinary word? For, it dawned on me a while back, as a linguist, that the word "scatological" is the same as the Modern Greek word "skata," which means -- well, I don't really know how to explain it, except by saying that there are several word pairs in English in which an initial *sh* and *sk* are derived from the same word. For example, the word "skirt" and "shirt" are both derived from the same older word. So look up the word "scatological" in the dictionary, and you might be surprised at its etymology.

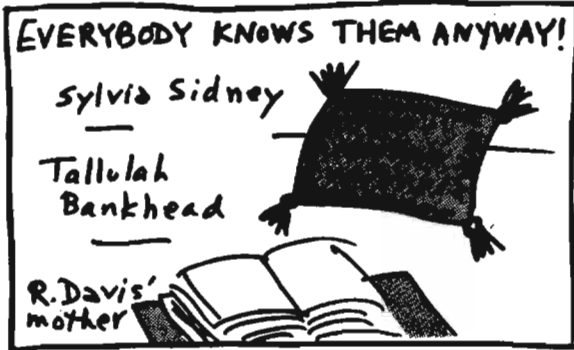


Slide 4

Yes, Indo-European roots can reveal a lot! For example, there I was, several years ago, when Peter was only 3 years old and all our friends were saying that he had a speech impediment. Well, he didn't and he doesn't. And so I was rather pleased when he would try to build blocks and, when they fell down, he would say, "Oh, drit!" I'd think, "Good, he can't say it like Dad does!" But then again, years after Peter was grown, it dawned on me. "My God, 'drit' is a metathesis of 'dirt'! I wonder if . . ." Sure enough! It was! And if you go to the dictionary and look up the English word "dirt," you'll be amazed at what it really means. Not only that, but it's same word as the German "Dreck." (As in the inexpensive furniture that furniture salesmen try to push -- furniture which is "Dreck from the factory," to use the Yiddish in-joke.) Yes, "dirt" means **bleep!** Of course, it's not the only meaning. As the nun in the story learned. The nun, seated in the airplane, doing a crossword puzzle, who asked her companion, "What's a four-letter word meaning 'dirt'?" He answered, "Silt." "Oh dear," she said, "do you have an eraser?"

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So what's the fuss? Everyone seems to know the words anyway. Even women! Those soft, cuddly -- no, I shouldn't use sexist terms! -- those rough, uncuddly creatures know them. Take, for example, Sylvia Sidney's needlepoint book (Slide 5). You cuddly or uncuddly females can ask yourself, "What's he doing,



Slide 5

reading a needlepoint book?" But I'm going to stay with the example. In that book she has a full-color photograph of a cushion she embroidered for a friend in show biz. It says, "O LORD, give me a BASTARD with TALENT." Why not? Bastard's a word. And Tallulah Bankhead, when she was introduced to Norman Mailer! You recall that in *The Naked and the Dead* Mailer used a commonly used Army word repeatedly, but he spelled it differently -- he put a final g on it, instead of the original *ok*. That caused quite a ruckus in the publishing business then. Imagine, using the actual word (sort of), instead of using a dash! So when Tallulah Bankhead was introduced to Mailer at a party, she said, "Oh yes, you're the young man who doesn't know how to spell **bleep!**"

Or maybe everybody doesn't know them?

who used to work here, came from a very cultivated family in San Francisco. Royola once said that, when she or her sister would bring home a new word that they had heard someone use at school, her mother wouldn't say, "That's a nasty word!" Instead, she would say, "Let's look it up in the dictionary and see what it means. Let's see, how do you spell it? F? Then what? Why, it's not even in the dictionary. So I guess it's not a word! Why would anyone want to say words that don't exist?" Well, it was a pretty good trick, but it won't work with current dictionaries.

Thus, we can use various combinations and permutations of trickery to refer to nasty words without actually saying them. We can use phonetic "close ones" ("Fudge!") or fancy terms derived from Latin or Greek ("Coprocephalus"), etc. But if we want to be stylishly deceptive, we can use foreign terms. The problem is that, if we say "Merde!" often enough, our listeners might get the idea that it's a nasty French

word, and then we have to disguise it. But that's no problem. We can say, "Mer-r-r d'Azov" (that's "Sea of Azov" in French). Or "Mer-r-r Daly of Chicago!" Or even do what the French do -- refer to it as "le mot de Cambronne." Because French General Cambronne was famous for saying it, so it has become "Cambronne's word." Just as "Nuts!" is General McAuliffe's word. Or, rather, just as it ain't! Because, even though much has been written about how McAuliffe told the Germans "Nuts!" when they asked him to capitulate at Bastogne, he didn't really say that. I can see the poor general up there in heaven now, strumming his harp, saying, "Gee dee it! I didn't say it!" No, he really didn't say it. He said something else that was sort of similar, but a bit more army-ish. To make the story more acceptable to the news services and the delicate readers Stateside, his original five-letter rejoinder was replaced by "Nuts!" (was this the first and only time that a four-letter word was put in to clean up the text?).

And there are even more ways of concealing what you want to say. You can use a secret language -- in your own family or in your own crowd. Take, for example, Cockney rhyming slang. "Me and the trouble and strife" means "me and the wife." And who are the "God-forbids"? -- why, the kids! After a while, though, everyone else learns the secret language, so you have to introduce refinements. With Cockney rhyming slang, the refinement was to drop the last element -- the rhyming word. So, nowadays, "Run up the apples!" means "Run upstairs!" (it rhymes with "apples [and pears]"). "It's in 'is titfer!" means "It's in 'is 'at!" (rhymes with "titfer [tat]"). All right, then, why is the Bronx cheer ("le moŕ d'Archie Bunker") defined in *Webster's Third* as "raspberry 3"? And what does the third definition of "raspberry" ("A sound of contempt or derision made by trilling the extended tongue between the protruded lips") have in common with raspberries? *Webster's Third* doesn't say.

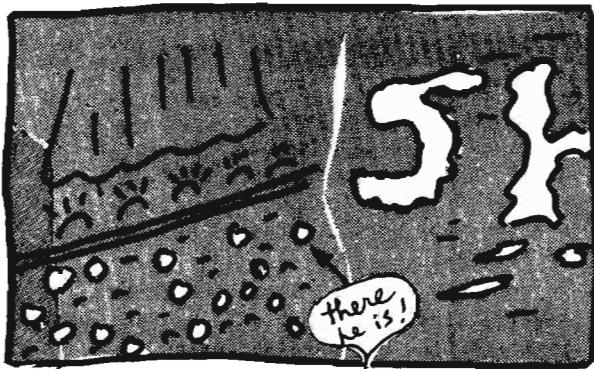
Webster's Second is no help, either -- it only says "[orig. E. slang]." Well, to understand the origin of the expression that so many people use innocently, you have to know Cockney rhyming slang and figure out what rhymes with "raspberry tart."

You can hide meanings in music, too. Often, when people say that the words of a song don't make sense, that they're just "nonsense," that's



when they have a meaning! The songs of the 1930s and 1940s that used to mean "nothing" to us now sound different -- "Want some seafood, Mama!" Seafood! . . . Or just listen to "La Cucuracha" -- they've changed the lines in it. What happened to the line "Porque no tiene, porque lo falta marijuana que fumar"? When people find out the secret meanings, the words change. My youngest girl, Mary, plays a song over and over, "Shake your booty!" As many times as she plays it, I cannot actually *hear* the word "booty" -- it sounds like "Shake your trooby!", "Shake your snooty!" "Shake your dooby!" But that's understandable, because language researchers have proven that if the same statement is repeated over and over, the human ear will hear it differently each time. Especially if it is a "nonsense word." But, in real life, "Shake your booty!" does have a meaning, and I'm not going to say what it is. Except to say that once, on television, they had several girls lined up. They asked them, in turn, "Would you shake your booty?" They all answered, "Sure!" Until they got to the black girl. "I ain't gonna shake *my* booty!" (Good for her!)

Until recent years, there have been infrequent instances when nasty words came up in print. (Even medical textbooks would explain things in Latin, rather than come out and call a **bleep!** a **bleep!**) Years ago, when H. Allen Smith was writing funny books, he wrote in one of them that his secret desire was to arrange the seating plan on the floor of the Metropolitan Opera on opening night. And he would arrange the bald heads in such a way that they would spell out "a four-letter word, and the dot over the I would be Nicholas Murray Butler," the President of Columbia University at the time (Slide 6).



Slide 6

I've also been told of a book by Philip Wylie, called *The Disappearance*. According to my informant -- I haven't been able to find a copy of the book yet -- God gets dissatisfied with the human race. So He decides to do something about it. To show His displeasure, he has the clouds form the letter S. That catches people's attention. Then they form the letter

H. By the time the clouds start to form the letter I, people start to think that it must be some practical joker with a plane up there. But, no, there isn't any plane! So they realize that it is a sign of God's displeasure. He also writes the appropriate word, in Russian, in Cyrillic letters, over Russia, but it doesn't cause any ruckus. Not until He says something about the leadership! How typical! But the question is, Would God talk that way? Well, in my capacity as CRYPTOLOG editor -- forgive the plug -- I recently edited an article that will appear in a future issue. In the article, God created things like a communications terminal, a link, and so on. Then He went on vacation, leaving everything in Control's hands. When He came back and say how Control had mixed everything up, He said, "What the devil happened?" And Control answered, "That's just it! The devil made me do it!" When the proof sheets (with the "d" in devil duly lower-cased!) were shown to a few people to see if there were any objections, one person wrote, "I object to this strongly. God wouldn't talk this way." I don't know how he knows that. As for me, I do believe that even God can look words up the *Webster's Third*, and might use any of them in the proper context.

Nasty Words at NSA

And so, finally, we come to the real topic of this talk -- nasty words at NSA and how to handle them. If you, as linguists, want to read all the literature on the subject, you won't have much to read. There's that article that I wrote back in 1969. It was submitted to an Agency publication at that time (there was only one), and it was deemed to be unsuitable. So I sent it to the editor of a publication at a sister Agency. Over there in Langley? And they published it. They realized that the article had a point -- "Linguists have to *know* all the nasty words in their foreign language, and should not be embarrassed to ask what any word really means in English." Linguists have the right to know all the words in electronic engineering, don't they? So why not nasty words, too? If two people are talking to one another in a foreign language and one belts the other in the mouth, why did he do it? What did the other guy call him? Come on, now, don't be coy or cute! Tell me, if you know. Did he call him a "son of a camel-driver"? "No, it was worse than that." Well, what was it? "I don't wanna tell you." The article explains why and how the linguist should insist on finding out what everything means in the language he specializes in, even the "unconventional" words.

When [redacted] was at Detachment R, he wrote a dissertation on Russian "taboo" words. Most of the students at Detachment R wrote dissertations like "The Soviet Police System" or "The Role of the Messkit Repair Battalion in the Tactical Situation." So, when Larry said

P.L. 86-36

that he wanted to compile a dictionary of "taboo" words, he had a heck of a time getting that dissertation approved. Finally it was approved, with the understanding that the complete printing run would be five (count 'em, five) copies, and Larry would do his own typing of the multilith stencils (we wouldn't want our typists to see, much less type, those words, would we?). Larry then went around to the Russian instructors and pumped them for information. They all said the same thing, "I personally have never used these words, but I have heard other people saying them." Larry got all of them, in poems, in songs, in expressions, and, of all things, he gave the English translations of them! That made the dissertation a very unusual dictionary. In fact, about 2 years ago, our librarian said, "Hey, here's a mention in a bookseller's list of a dictionary of Russian obscenities. It was published in Cambridge and it costs \$10.00. Should we buy it?" So we bought it. And it turned out to be a pirated edition of Larry's dissertation, with his front page torn off. Someone else had apparently felt that it deserved a bigger printing run.

[redacted] also wrote something for CRYPTOLOG on Soviet prison slang. But, for the most part, if you work in foreign languages at NSA, you won't have any "literature" to read. All you will have -- if you're lucky -- is a list of nasty words in the appropriate language, but without their definitions. It's like telling you, "Here's a list of words that you're not supposed to translate, and you're not even supposed to know why!" As you will see, this really isn't the best way to handle the situation.

Just as English dictionaries have not always listed the nasty words, foreign-language dictionaries produced by the various national lexicographical groups have not always contained those words in the foreign language. Lately, again as in English, the situation has been changing. The Chinese, for example, have been including in their dictionaries, together with English translations, words which previously would have been considered to be unprintable. But dictionaries are not always helpful. The Russian dictionaries that do list "yolki-palki" (which means "Christmas trees and sticks") sometimes limit their definition to the old standby, "Indecent expression not used in polite society." Why don't they come out and say, "Don't use it because the first syllable sounds as though you were going to say something else"?

Since dictionaries used to hedge like that, the Agency's linguists had to muddle through any way that they could. [redacted] many years ago, prepared a list of Russian words which, if they showed up in the language material, indicated that we weren't really interested in it. Since [redacted] had a professorial turn of mind, he thought it might be

nice to give the English meanings. No, it was pointed out to him at the time, people didn't have to know what the expressions meant -- all they had to know was that the material wasn't worth looking at. At that time, several people working in that area formulated Rule No. 1 when dealing with Russian text: If you have an expression that you cannot find out the meaning of, and one of the words in it begins with a Cyrillic X, stop trying to find out! It's probably indecent!

That rule should have been kept in mind several years ago when Charlie Pritchard was one of the Russian linguists channeling work to

[redacted] Once he showed her something he had, but he kept his hand over something else. "What are you covering?" she asked. Well, it was a four-word expression in Russian, and one of the words began with an X. (Now, you know that it must have been nasty!) She insisted she had to see what it said, and he insisted that he couldn't show her. To make a long (and classified) story short (and unclassified), when he finally removed his hand, she said, "But that makes sense!" And then proceeded to translate it in a most improbable way. Its real meaning

P.L. 86-36



can be given here as "bleep my bleep!" or "verb my noun!", and the verb isn't "kiss."

But Pritch couldn't tell Ruby what it meant. Instead he told her the five separate and distinct grammatical reasons why it did not mean what she said it did. She still was unconvinced, and he left fuming. When he returned to his desk and told others what had happened, someone suggested, "Well, Pritch, why didn't you tell her what it means?" "No," he said, "it wouldn't have done any good. She would have said, 'Pritch, I asked you a civil question -- the least you could do is give me a civil answer!'"

Can NSA linguists learn from newspapers how to handle obscene expressions? Maybe and maybe not. Because even the same newspaper can't decide how to handle them consistently. Here are a few quotes from *The Washington Post*, just within a two-week period. Dashes and hyphens are "as in text."

- "a commonly heard 12-letter epithet";
- "'You m--- f---, you better open the door, or we'll blow your brains out!";
- "'Damn' cost 5 cents. 'Hell' - 10 cents. 'Goddam' was 25. What if I said, '---.' 'That's free!";
- "[Joan Jett,] the band's rhythm guitarist, said, 'We'll give him a raft of s--- as soon as he walks in the door!";
- [Richard Pryor to tennis opponent Sander Vanocur:] "'I'm gonna whip your a---!'"

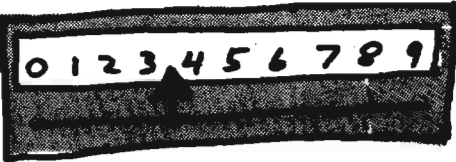
There are a lot of questions to ask here. Such as, if the epithet is that "commonly

heard," why not *print* the mother? And, what is M-plus-three-dashes F-plus-three dashes supposed to mean? -- is it the same as the "commonly heard epithet"? And exactly what word can Robert Mitchum say for free, without putting money in Loretta Young's swear box? In this inflationary age, I'd like to know what I can get for free -- why not tell me? And Richard Pryor's expression -- is "a—" really such a bad word?

Well, maybe it is, because the same *Washington Post* printed, the same week, an article about an FCC ruling concerning "seven commonly-used epithets which range from three letters to 12." But the article didn't list them. So, minutes before I started my talk here, Dave Williams asked me if I could think of any nasty three-letter words. "Yeah, one is A-dash-dash." "Oh, that's not so bad!" "Well, then, how about **bleep!**"

What if there aren't enough clues? In our business we tend to measure things, count letters, see how long dashes are, count the dots. What good does it do if we read "m—f—"? ("First dash is too short, second dash is too long!") Or "m---f---"? ("Not enough letters!") Or "you _____!" ("Is the word really that long, or is it a phrase?").

So, if you have trouble figuring out the nasty words in your own language when not enough clues are given, what do you think it is like when you're dealing with foreign languages? When someone uses an expression that is defined in the foreign dictionary as "An improper expression" and you have no idea why? Or what about when you *do* know what it means, but are advised to treat it in your translation as "[Obscenity]"? What good does that do your reader? It has been suggested that, when it is impossible to give the actual translation of a foreign nasty word, it might be nice to



have something like a Richter scale of improper words -- ranging from 1 ("Convivial chuckle") to 9 ("Punch in the mouth"). Perhaps we could call it the Schichter scale? Then, in a translation, instead of saying "[Obscenity]", we could say, "Speaking in Polish [or whatever], he called his conversational partner a Schichter-4." Well, that gives the reader some idea -- at least it wasn't a 9! I realize that any scale won't work all the time. For example, among friends, or in a John Wayne movie, "you cross-eyed sonnovabitch!" might be only a Schichter-1 (if that high), but elsewhere?

In the absence of any hard-and-fast scale, why don't I just give you my own word of advice? From one practicing linguist to another. First,

- UNDERSTAND. Insist on your right, as a linguist, to know every word in your language of specialization. Insist on the need and the right to buy "dirty dictionaries." Don't be embarrassed at the words in them. Everybody knows what a _____ does for a living! Don't guess at the meanings! Did the guy in Arabic say that the other guy was a "dirty son of a camel driver" or did he say that he was doing something to or with a camel? Remember, don't be embarrassed! *You* didn't say it, *he* said it!

Then, having understood what it says, you'll have to

- DECIDE ON THE TREATMENT. You might have to ask your boss for guidance on this. Some bosses don't like to see words like _____ in print. I myself feel funny about saying words like _____ into this mike. So you will have to decide which of the following you want to do:
 - Hem and haw. The traditional treatment, "beating around the bush." Paraphrase. Use "nice words." Don't give the reader any idea what the words meant.
 - Be a tease. Give a minimum amount of clues. Maybe the correct first letter, but a misleading number of dashes. As in, "Everybody knows what a c---- does for a living."
 - Use the correct number of dashes, and hope that your reader gets the idea. "That dirty c-----!" (If the reader gets the idea, that's okay. If he doesn't, he can ask around.)
 - Come right out and say it! If he called the other guy a _____, he called him a _____! So put it down that way! That's what they do in court. The judge tells the witness to say exactly the words that the defendant said, and the court stenographer puts them into the record. They're only words!

Why, then, when giving my "word of advice," did I use the traditional method of handling these words -- hypocrisy? Why, when telling you to "come right out and say it," did I use a long dash and not "come out and say it" myself? Was it because "c-----" isn't in *Webster's Third*? Because you can say, or imply, certain words but feel inhibited about seeing them in print? Why, as I try to explain away my hypocrisy, do I have a mental image of Wallace Beery, completely flustered, saying, "Aw-w-w-w, shucks!" I can tell you, and tell myself, not to be embarrassed. That we didn't invent the word. That it has been around for at least 500 years. That everyone knows it anyway. But, aw-w-w-w, shucks!

WHAT ARE THEY UP TO, ANYWAY?

P.L. 86-36



CAA News by

[Redacted]

P14

It may be the only secret open meeting in the building. Certainly it's the only one I know of. The CAA Board meeting, that is. How can it be secret and open too? Well, sometime ago, the CAA Board decided to open up its meetings to the public and let a little sunshine in. That's the open part. But, since we started this policy, nobody else comes to the meetings to see what we do, or to tell us what we ought to do. That's the secret part. Obviously, the word hasn't gotten around about what wild things happen at CAA Board meetings.

Seriously, though, folks, you are invited to come along and voice your opinions about what the CAA should be doing, what special interest groups ought to be formed, etc. All right, you say, where and when is the next meeting? Funny you should ask, because, as I write this (early June), I don't really know! We usually hire one of the conference rooms on the second or third floor, and the room will vary according to what is available. (Say, maybe that's why nobody comes -- they can't find us!) If you want to know where the next meeting will be held, you can always ask one of the officers. Or, better yet, join CAA and get your very own announcement mailed directly to you. If you're shy, just watch the announcements on the CLO bulletin boards (there are four of them, one in each building).

Maybe our strategy is all wrong. Maybe we should see how long we can keep our string of unattended meetings unbroken. We could have monthly changing times and rooms. Maybe offer a challenge cup to whoever solves our rota and actually shows up at our meeting place. It's a thought. . .

Upcoming CAA events

AUGUST

The opening day ribbon has been cut, all the festivities have died down, and the brand-new remoted system is now operational. The guy who used to give those fancy speeches about what the system was *going* to do has moved on to some other project. What happens now? What is it really like to live with a remoted system day by day? What are the real-life problems that will now be encountered by the people who are responsible for making the system work on a daily, operational basis? Will Mary leave George? Will Fido survive surgery? These and other questions will be discussed when Whitney Reed and B5 give us an inside look at "Life With a Remoted System."

SEPTEMBER

The whole subject of NSA initiatives on support to combat operations, both in Europe and in the Pacific, is scheduled to be explored by [Redacted] of V4.

Check your nearest CLO bulletin board for exact dates, places, and times. CAA members will receive notification by mail.

Communications Analysis Association

Board:
 President: [Redacted]
 President-Elect: David Gaddy, 3247s
 Treasurer: Timothy Murphy, 3791s
 Secretary:
 Board members: [Redacted]

Letters to the Editor

P.L. 86-36



To the Editor, CRYPTOLOG:

I am writing to congratulate you on an absolutely smashing article in CRYPTOLOG. I refer to "The Polyhedral War," by [redacted] (illustrated by [redacted]). Please pass my "well done" to both of them.

I recognized immediately an old friend in the pentagonal dodecahedron which the author calls a "pitiful polyhedron." The model is a delightful toy and I have spent many enjoyable hours flexing the many dodecahedra made for me and my friends.

One question: What do the other models do?

Derek Weeson

Editor's reply:

Now I know how Ann Landers feels when she has to decide whether she has a real letter or one from "the boys at Yale." Assuming that this is legitimate (big assumption: they haven't used those envelopes in years), thank you for your kind remarks. In reply to your question: they do pretty much what the rest of us do -- occupy space.

(U)

Dear Editor:

You SED DRAW TINY,
 & THIS IS TAP TINIEST
 I kin draw.



Yanz frooly

Ima Mouse.

P.S. You can keep your
 crumby prize!

Editor's reply:

Your note puts us in rather a quandary. Your entry is not only the best one we received this month. It's the only one! In any event, we are required to carry out the terms of our offer and award you a CRYPTOLOG subscription (the "crumby prize" you refer to). Trouble is, we can't find your name in Locator's files. The last Mouse family we knew worked in the sixth wing of B Building at Arlington Hall more than 20 years ago (they used to love those cheese-and-peanut-butter crackers Norman K. would leave in his desk among his galoshes and not quite empty Coke bottles. Any kin?

(U)



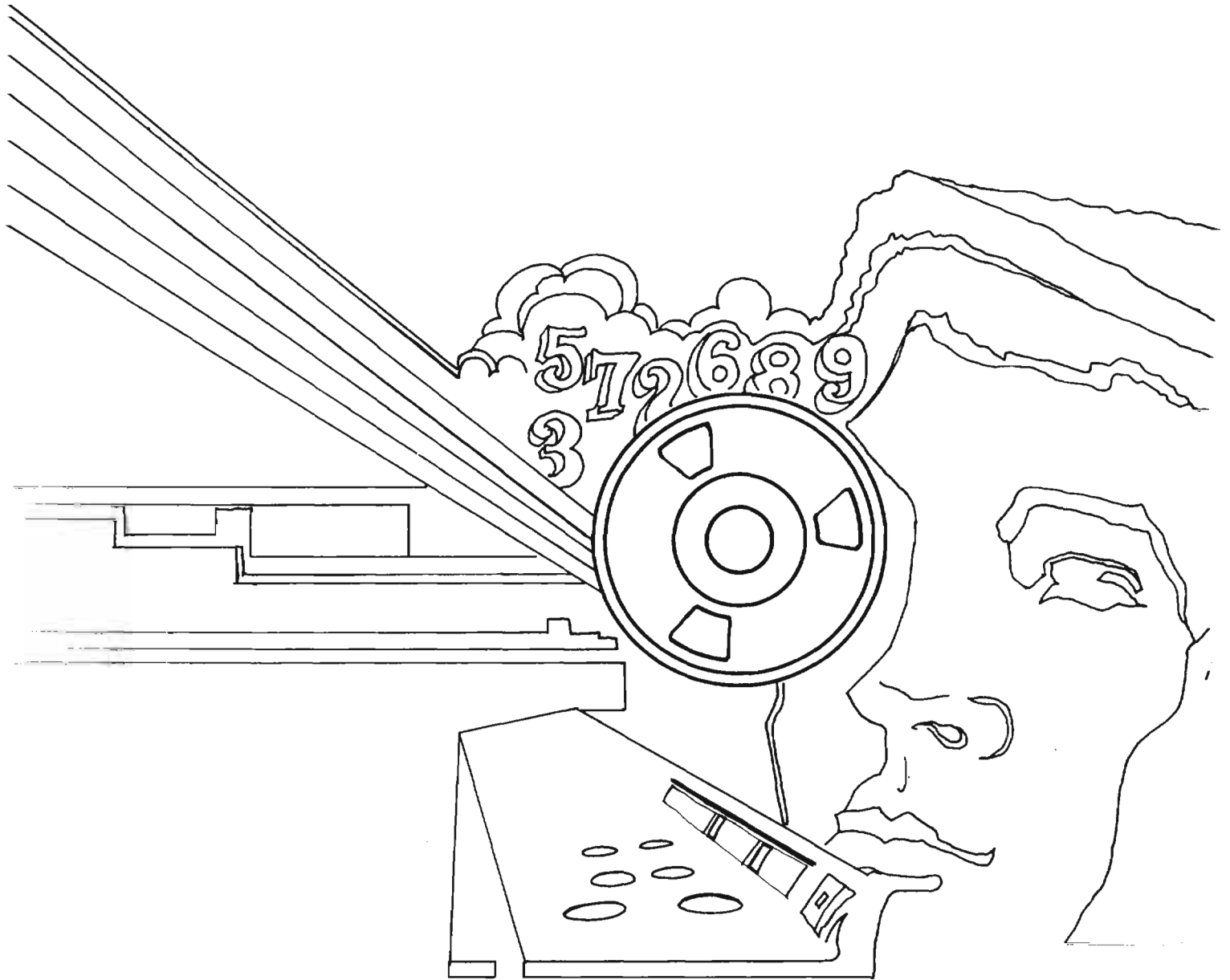
Solution to "Match Them Up!",
 by Tony Melzer
 (CRYPTOLOG, June 1977)

- 1-f Amin-Uganda
- 2-d Asad-Syria
- 3-T Bhutto-Pakistan

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|------------------------------------|------------------------------|
| 4-B Boumediene-Algeria | 19-C Neto-Angola |
| 5-H Castro-Cuba | 20-c Numayri-Sudan |
| 6-A Daoud-Afghanistan | 21-e Nyerere-Tanzania |
| 7-L Desai-India | 22-P Qadhafi-Libya |
| 8-Y Fahd-Saudi Arabia | 23-M Rabin-Israel |
| 9-O Fukuda-Japan | 24-Q Ramgoolam-Mauritius |
| 10-G Geisel-Brazil | 25-I Sadat-Egypt |
| 11-K Giscard-France | 26-a Senghor-Somali |
| 12-S Hassan-Morocco | 27-Z Siad-Senegal |
| 13-N Houphouet-Boigny--Ivory Coast | 28-W Soares-Portugal |
| 14-R Lopez Portillo-Mexico | 29-b Suarez-Spain |
| 15-V Marcos-Philippines | 30-X Smith-Rhodesia |
| 16-J Mengistu-Ethiopia | 31-F Tindemans-Belgium |
| 17-g Mobutu-Zaire | 32-D Videla-Argentina |
| 18-U Morales Bermudez-Peru | 33-E Zia Urrahman-Bangladesh |

(U)

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~~TOP SECRET~~