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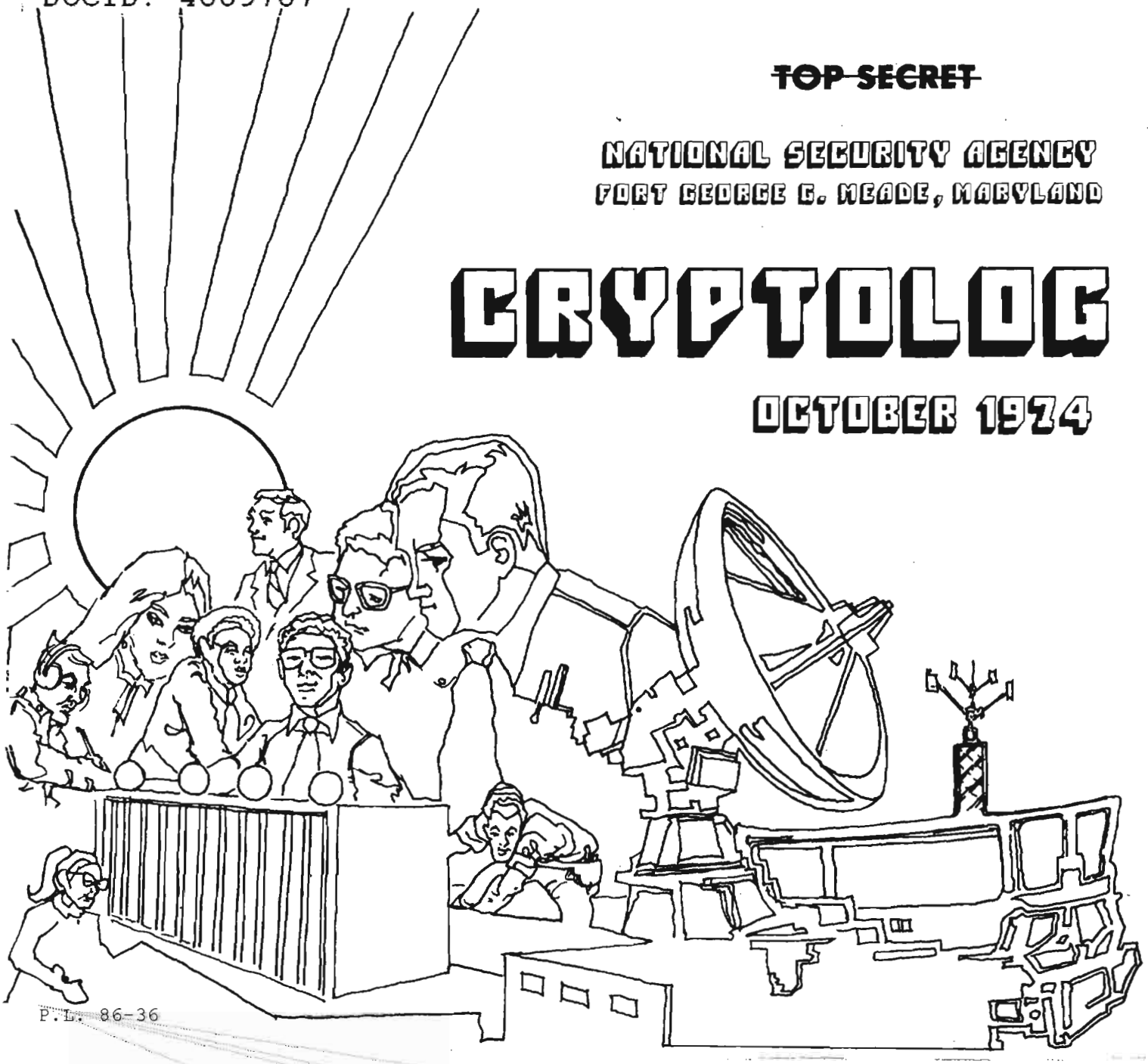
NATIONAL SECURITY AGENCY
FORT GEORGE G. MEADE, MARYLAND

CRYPTOLOG

OCTOBER 1974



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The Mission of the SIGNALS PROCESSING REQUIREMENTS PANEL C6

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Signals processing and conversion is the step immediately following collection, in which

In a follow-on process certain tasks require additional staging; this is accomplished by intermediate processors

At this second point, the work of SPRP (the Signals Processing Requirements Panel), CPRP (the Computer Processing Review Panel), MARG (the Machine Allocations Review Group), and similar groups, overlap in their endeavors to expedite the overall processing-exploitation cycle. It is here that over-enthusiastic analytic commitments and expectations have their most drastic impact.

The primary mission of the SPRP is to order the processing and signals-conversion of the Agency's worldwide magnetic-tape collection effort in such a way as to expedite the processing of perishable intelligence and to balance the flow of materials processed in accordance with their relative importance.

The Panel is charged under its charter with the review of all existing and anticipated signals-processing and conversion requirements which will or could impact on C6. It is to advise DDO as the the validity, justification, and processability of tasks (both existing and projected). It provides a forum for review regarding the selection and processing of magnetic tapes as prioritized internally by the analytic shops. This usually eventuates in Panel approval of the DDO Quarterly SPRP listing. In the event of irreconcilable differences, problem areas are referred by the Chairman to DDO for resolution.

Past

The Signals Processing Requirements Panel (SPRP) was established by the Assistant Director, Production, in 1968 to allow for review and expediting of signals processing of magnetic tapes received in PROD. This review at PROD level permitted decisions regarding possible corrective actions, and allowed broader influence to be brought to bear on the ordering of tasks impacting on C6, the Office of Signals Processing and Field Support.

For some years the requirements levied on C6 had exceeded available processing capacity and manning resources.

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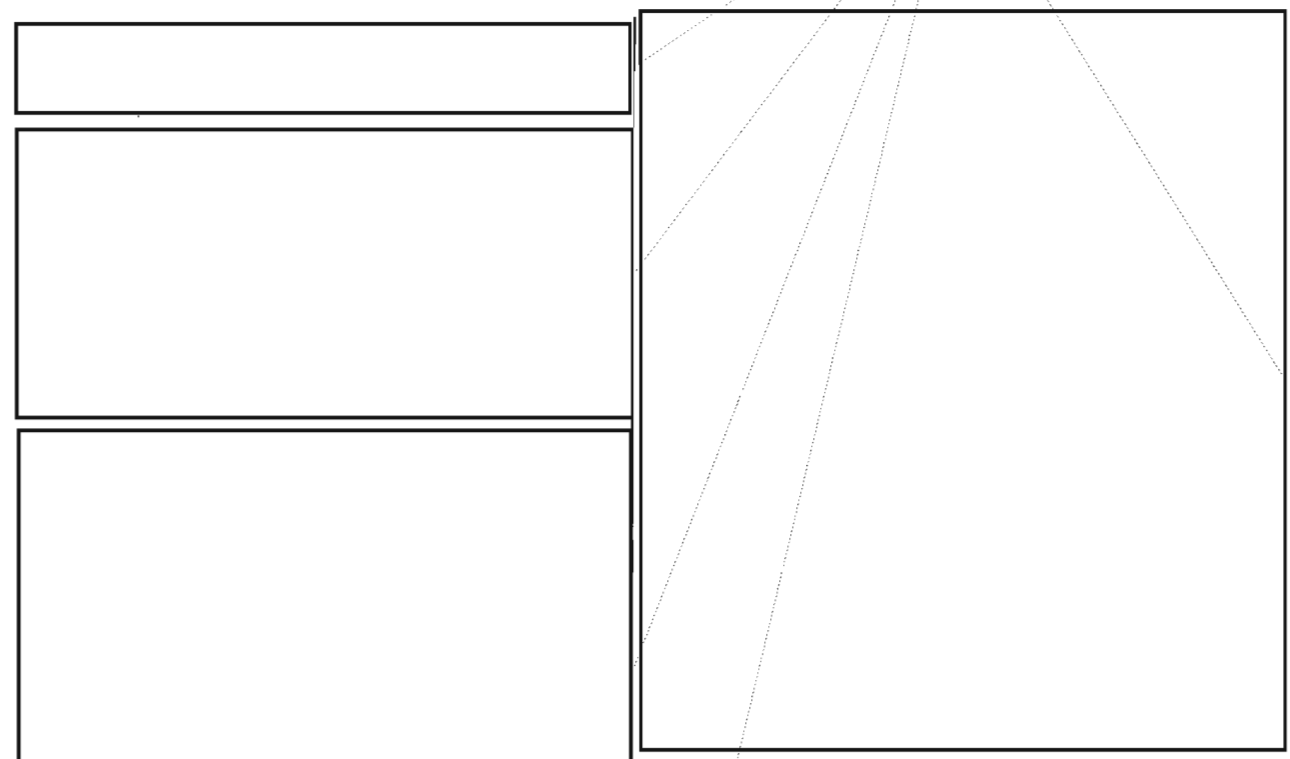

Present

The Signals Processing Requirements Panel, currently chaired by the Executive for Deputy Director, Operations (XDDO), has a basic membership of 15, representing each of the analytic groups, plus C, L31, and selected P and V Staff personnel. R&D is not presently represented, though its participation would be beneficial. The Panel Charter was updated and reestablished by DDO action on 29 August 1973. This restatement of DDO interest was promptly followed by issuance of "Operations Policy Letter #3, Coordination of All New Collection Tasks," dated 25 October 1973.

The prioritizing of signals processing tasks is arrived at after thorough Panel review of anticipated volumes, collectibility and potential intelligence value. The listing for C6 is the single most useful guidance available to allow accommodation and adjustment of established and varying workloads. Although the SPRP is faced primarily with matters of OPS concern, occasionally actions can and do have impact elsewhere within the Agency. C6 service is often available outside SPRP channels to meet requirements levied by S or R, and serves to assist L31 in lessening the effect of problems relating to longer-term magnetic tape questions.

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[redacted]

Prioritizing signals for C6 processing has to date been of preeminent concern to the SPRP, and further refinements may yet be possible and necessary, but other aspects of the charter relative to broader responsibilities have not been given equivalent emphasis. As an initial step, an interchange of representation between the SPRP, the Computer Processing Review Panel, and the Machine Allocations Review Group has been accomplished to exchange information relating to correlated matters. It is hoped that such interchange will help close the information gap between the collection and processing stages and the subsequent data processing stages.

Future

The SPRP, and C6 as the Office of Signals Processing, function at one of the more crucial junctures in the overall cycle of collection, processing and exploitation.

[redacted]

[redacted]

The impact of new collection concepts should also concern the SPRP.

[redacted]

Notwithstanding significant progress made in efforts to coordinate collection, processing, and analytic requirements, plans for future collection systems often do not consider the impact they may have elsewhere. This is particularly true of existing signals-processing capacities and, more important perhaps, our analytic capacity to digest and exploit.

[redacted]

These are but a few of the questions that must be asked and discussed by panels like the SPRP, the CPRP, and the NSOC Users' Group. If they are not considered, efforts towards balanced collection and processing will once again be submerged by hyperconcern for volume in lieu of content. Unless a thorough review and thinning out of spurious requirements is undertaken, no computer will ever keep pace with collection, nor will storage capacity ever be sufficient to store materials never looked at and perhaps never desired.

All aspects of the SPRP charter need to be implemented, and the Panel encouraged in courses of action which will more directly assist DDO in the decision-making process, particularly regarding possible equipment and manpower savings.

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EVEN A 5-YEAR-OLD CHILD...

by EMERY W. TETRAULT, P16

The chief difficulty facing the person who comes new to the study of linguistics is that of being prepared to look at language objectively. For language is something we tend to take for granted; something with which we are familiar from childhood in a practical, unreflecting way. And, as has been often observed, it requires a particularly strong effort to look at familiar things afresh. Nor is it merely our intuitive or practical familiarity with language that stands in the way of its objective examination. There are all sorts of social and nationalistic prejudices associated with language and many popular misconceptions fostered by the distorted version of traditional grammar that is frequently taught in the schools. To free one's mind of these prejudices and misconceptions is indeed difficult, but it is both a necessary and a rewarding first step. (John Lyons, *Introduction to Theoretical Linguistics*, 1968)

If this statement needed substantiation, NSA would be a good place to do the field work. True, not everyone needs to become a language theoretician, but those who are called upon to make decisions and formulate policy regarding language matters should attempt to do so in a manner consonant with the realities of natural language.

Limitations of space, time and energy make even a sampling of dubious language generalizations a practical impossibility. However, two such conclusions, both about Chinese, can serve to illuminate a very important fact of language.

The first of these has the immediate virtue of being totally untrue, even though it has been one of the cliches of Chinese language instruction:

"CHINESE HAS NO GRAMMAR."

What is presumably meant by this is that written Chinese has far fewer overt markers of case and subordination than English and virtually no *explicit* categories such as number and tense. Ordering and context fill the resultant gaps, or what seem like gaps to the speaker of English. The fact remains, however, that Chinese indeed has a grammar in the sense of the word that is current today; that is, a code which enables two speakers of the language to communicate with each other. There is, in addition, every reason to believe that the grammar of Chinese presents as many complexities as that of English, in spite of its lack of surface markers.

The second generalization is far more difficult to deal with, because it is in some respects true:

"LEARNING A LANGUAGE CAN'T BE ALL THAT HARD; EVEN A 5-YEAR-OLD CHILD CAN LEARN TO SPEAK CHINESE FLUENTLY."

This is a reasonable statement on the face of it. After all, the streets of Peking are teeming with children, many of whom are 5 years old and all or almost all of whom speak Chinese "with the speed of summer lightning."

The implications of this statement, if it is true, are staggering. In theory the average adult should have no difficulty mastering any behavior learned by a 5-year-old child. In practice few of our language analysts, military or civilian, achieve even a 5-year-old's command of Chinese.

Why is it that a healthy, reasonably intelligent and well-motivated 20-year-old American cannot match the achievements of practically any 5-year-old resident of Peking, even after 47 weeks of intensive training?

The answer lies not in any general defect in 20-year-old Americans or in our training system per se. Rather we should seek it by trying to analyze the linguistic accomplishments of our hypothetical Chinese 5-year-old.

If a Chinese child is like an American child, at the age of 5 he possesses a sizeable stock of lexical items (well beyond 1,000,

almost all of which are intelligible) and, what is more important, he commands an array of sentence forms which approximate those of adult colloquial usage, with grammatical anomalies limited to less frequently encountered structures: all in all, an impressive feat.

The awe which a child's language proficiency inspires begin to grow in a geometric progression when we consider one further fact. Evidence suggests that a child does not "learn" the utterances of his language, at least not in any stimulus-response model of the learning process, but rather he infers the rules of his language from the speech of those around him. One aspect of this evidence is the fact that he produces novel utterances, utterances which he could not possibly have heard from others.

One class of novel utterances contains forms resulting from an inappropriate, but perfectly consistent application of inferred rules; e.g.:

Bang! you fall down! I *deaded* you!

Our cat has four *foots*.

(Parent) Eat your peas.
(Child) I don't want *some* peas!

It could be that the rule-governed or analogous formations such as "foots" are somehow a consequence of the relatively low frequency of occurrence of the lexical item in the child's speech. Yet such irregular strong verbs in English as "come", "go" and "sit" appear with high frequency in the past tense, but tend to be far less stable than the less practiced regularized /d/ and /t/ forms of the weak verbs, as indicated by the fact that at a certain point in the child's development he suddenly abandons the irregular form in favor of the regularized form and produces "comed", "goed" and "sitted."

If we adopt the view that our hypothetical 5-year-old has somehow inferred the rules of an adult-like grammar from the speech of those around him (according to some built-in timetable of his own), then we must allow that he has performed a truly prodigious feat, one which outstrips anything done by the best minds in scientific linguistics.

What makes a 5-year-old, virtually any 5-year-old, such a good linguist? Is there some way that we could bottle it and distribute it among our language analysts? The work done by E. H. Lenneberg and others in the area of the biological aspects of language provides at least the outline of an answer to these questions.

Lenneberg states that adult language functions take place predominantly in the left hemisphere of the brain (in the precentral area of the frontal lobe). He also states that such cortical specialization is not present in early life, but develops gradually in a process similar to that of embryological history. Thus, in adults left-sided central cortical lesions cause some form of aphasia in 70 percent of all such cases and in half of these the condition is irreversible.

Comparable traumata in childhood have significantly different consequences, however, according to the age at which the damage is incurred. As Lenneberg notes:

> Lesions of the left hemisphere in children under age 2 are no more injurious to future language development than are lesions of the right hemisphere. Children whose brain is traumatized after the onset of language but before the age of 4 usually have transient aphasias; language is quickly reestablished, however, if the right hemisphere remains intact. Often these children regain language by going through stages of language development similar to those of the 2-year-old, but they traverse each stage at greater speed. Lesions incurred before the very early teens also carry an excellent prognosis, permanent residues of symptoms being extremely rare. (Lenneberg "On Explaining Language" in Lester (ed.) 1973)

The picture is far bleaker for people who have suffered damage to the left hemisphere after the early teen years. Lenneberg notes that young men suffering such lesions as the result of war wounds have symptoms not unlike those of elderly stroke victims with a similar prognosis regarding the reestablishment of language.

In cases where damage to the left hemisphere of the brain occurs early enough in life, language functions *continue to be controlled* by the right hemisphere. The operative words here are "continue to be controlled." Lenneberg emphasizes that it is not a question of the right side of the brain "taking over" language functions from the left side, but rather that before a certain critical age both hemispheres are involved in language. This apparently is the key to explaining the linguistic prowess of our 5-year-old Peking resident, the ability of young children to recover from aphasias that adults overcome, and the often noted ease with which young children assimilate foreign languages when their parents take them to an overseas post.

Alas, beyond the early teen years left-hemisphere specialization of language functions is firmly established and language acquisition becomes a true learning process, an academic exercise at which some excel and some fail, but in which no one will ever begin to match the achievements of a 5-year-old child.

In summary, Chinese does have a grammar and we are only beginning to perceive its complexities; a Chinese 5-year-old has mastered most of these complexities *after having inferred them from raw data;* and this remarkable facility is somehow connected with the fact that language functions are not yet confined to the left hemisphere of the brain, a specialization which occurs at some time during the teen years.

If we accept Lenneberg's findings and conclusions (and there are stronger reasons for doing so than those which appear in this necessarily brief outline), what are the implications as far as NSA is concerned?

First of all it appears that we have to take still another look at the way an adult learns a second language. Most language-teaching methods in use today appear to depend at least in part on the assumption that the adult student is able to infer many of the foreign language's grammar rules from exposure to carefully selected utterances in the language. If Lenneberg is right about the critical age for language acquisition, we have to review this assumption and consider returning to an explicit presentation of second-language grammar to language students (something which I understand is already happening in the case of the proposed revision of the DLI Spanish course).

The second set of implications touch upon the selection of linguists, either students for language courses or applicants for language jobs. We should ask ourselves whether all adults are alike in left-hemisphere dominance or whether this factor varies from one individual to another. Is there a correlation (presumably negative) between hemisphere dominance of language and second-language acquisition? This appears to be getting into an area of investigation described by Dr. Ruth Day of Yale and Haskins Laboratory in an excellent paper which she presented to SIG/VOICE (the Crypto-Linguistic Association's Special Interest Group for Voice). Her findings imply that left-hemisphere dominance of language is not invariable in adults, since some people can hold raw language (auditory) stimuli in a short-term memory bank, while others begin linguistic (grammar) processing of such input right away. She has devised tasks which clearly discriminate between these two classes of individuals. We might want to investigate whether either type of person presents a better prognosis for second-language learning, particulary for aural comprehension and related functions.

Finally, we should come away from this with an increased appreciation of the linguistic accomplishments not only of 5-year-old children, but also of adults who, either through choice or necessity, are attempting to replicate, however feebly, a truly prodigious feat -- the acquisition of a human language with all of its complexities of expression and content, with all of its unknown and in some cases unknowable cultural implications. What the child can do as naturally as he runs or throws a ball, the adult must learn in a painstaking academic process involving literally thousands of units, hundreds of rules, and an infinitely innumerable set of possible combinations.

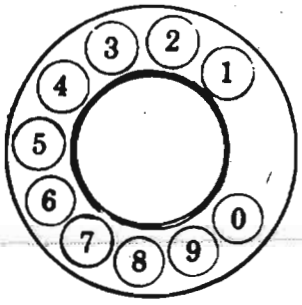
- -

(Note) Two papers by Eric H. Lenneberg, "Capacity for Language Acquisition" and "On Explaining Language" (both reprinted in Lester (ed.), *Readings in Applied Transformational Linguistics,* Second Edition, Holt Rinehart, 1973, are the source of much of what is contained above.

(UNCLASSIFIED)

A retired NSA employee living in Mexico had a telephone with digits but no letters on the dial. Learning that direct dialing was possible, he tried to call a friend in Maryland whose number in his ancient address book was Area Code 310, MItchell 7-[redacted] Retired Employee discovered he had problems!

Without looking at your own telephone dial, can you convert the MI from the MItchell exchange to the correct digits?



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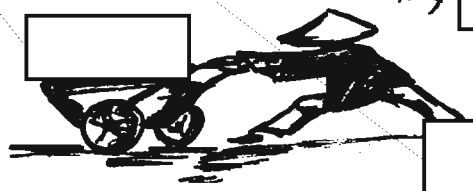
CHARACTER BUILDING IN THE PEOPLE'S REPUBLIC OF CHINA

by

and



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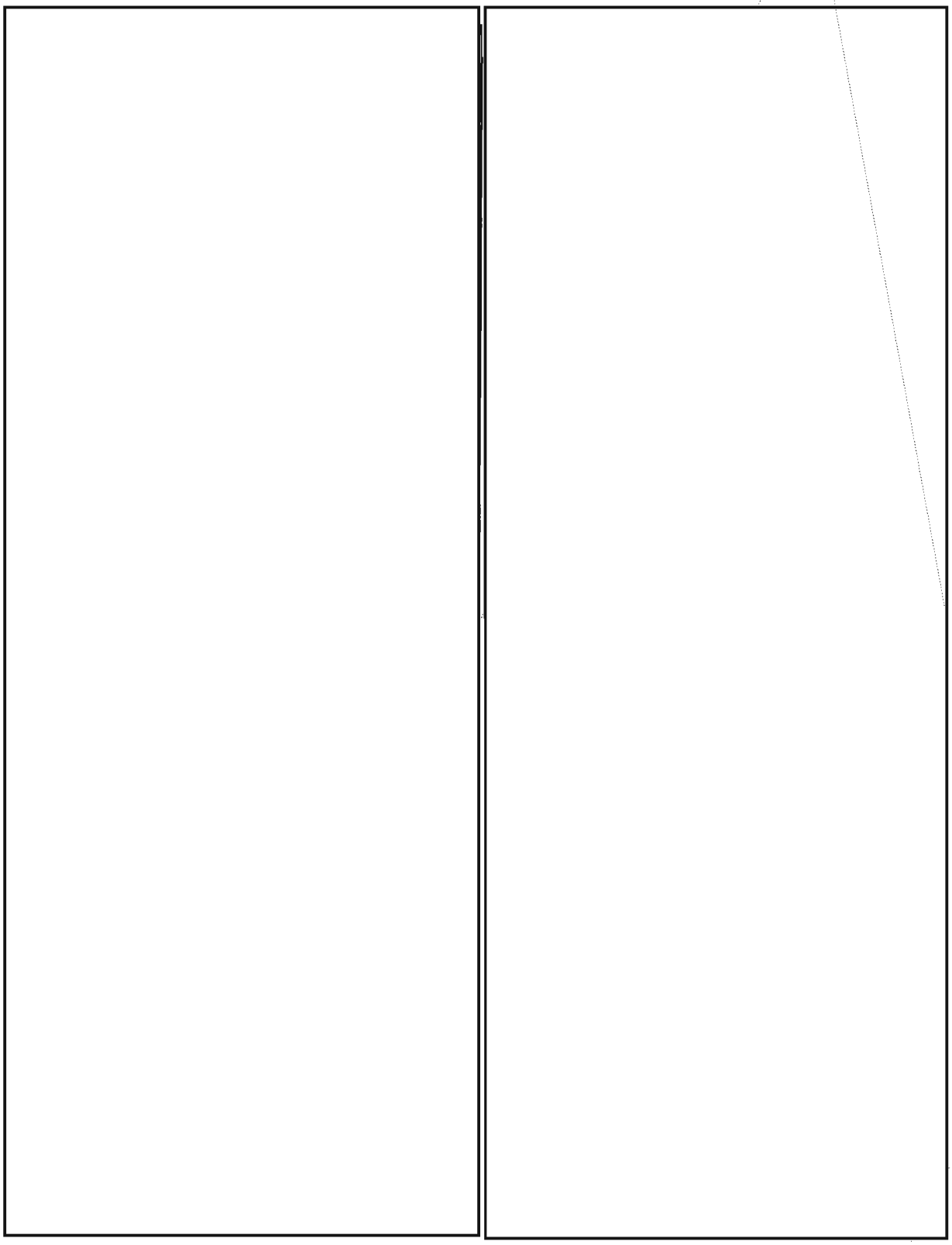

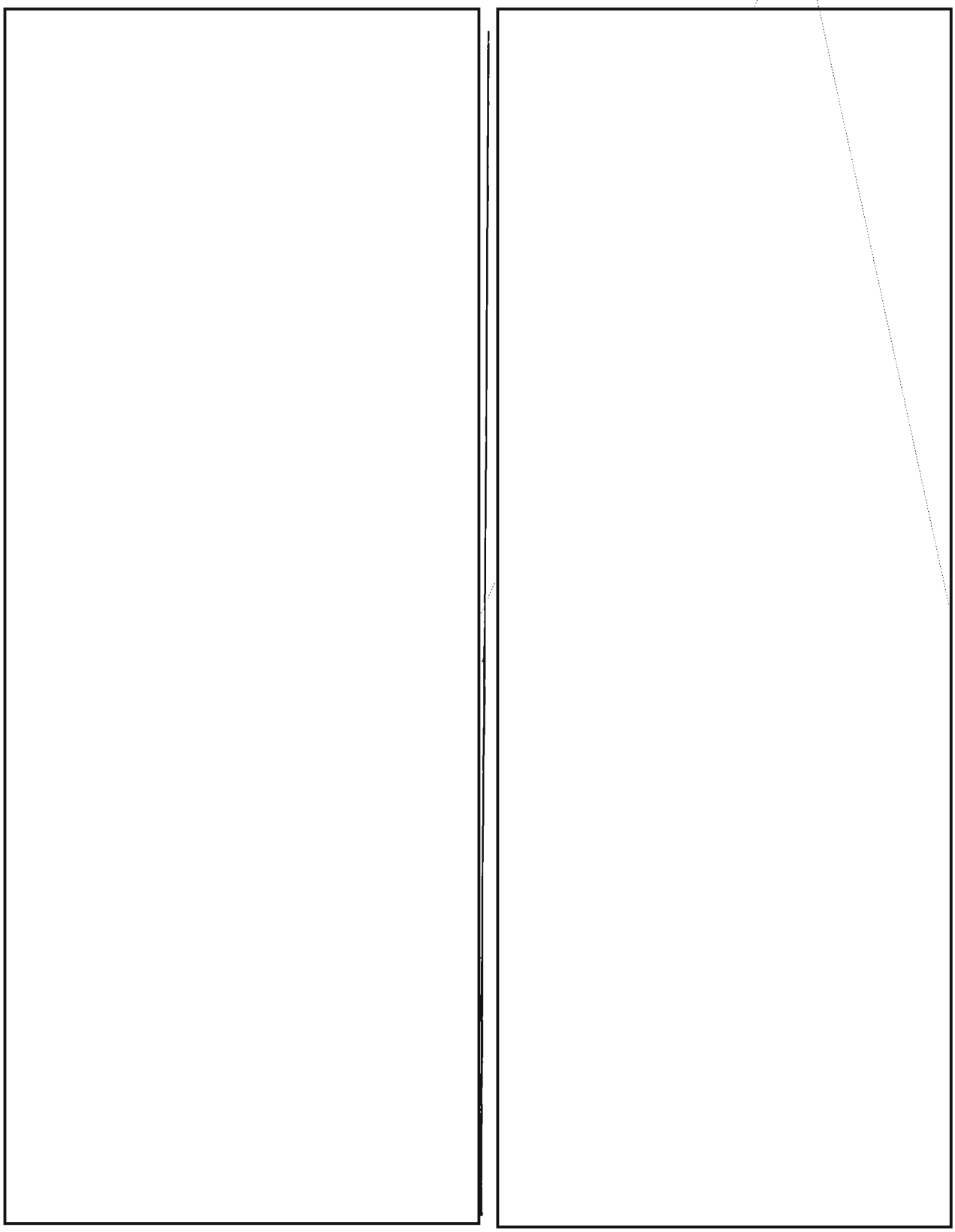

DEPARTMENT OF GOLDEN OLDIES

An Unofficial Glossary of WEASEL WOF

Date: Pre-1955
Author: Unknown (or do you know?)

"An accumulation of traffic analysis evidence reveals. . ." *It was lost in our files and we just found it.*

"Advance field sources report . . ." *In case this is wrong, don't blame us.*

"These changes have not been fully recovered..." *We can't break the system.*

"Tenuous evidence suggests the possibility that . . ." *This did not come out of a whisky bottle--we got it from tea leaves.*

"Another center has identified. . ." *We don't know how they did it, but we're afraid to argue the point.*

"Very probably. . ." *The analyst is a persuasive talker.*

"There are some indications. . ." *We feel sure of it, but we've never used this kind of argument before.*

"Spasmodic intercept. . ." *Haven't heard it for months.*

"Valid messages. . ." *You can't prove they're practice.*

"Thought to serve. . ." *It was carried that way on an old diagram someone saw once.*

"A historical survey of the net reveals. . ." *We were dopes not to notice this last year.*

"Fragmentary evidence. . ." *The rest of the traffic has been misplaced.*

"A re-evaluation of evidence, in light of recently available material. . ." *We really missed the boat on this one!*

The characters with the little sketch tell us, "Life is limited, but knowledge is boundless."

A LONG HARD LOOK AT THE Intern Program

by 'Anne Exinterne'

PART TWO: SELECTION AND ORIENTATION

In writing this I was initially reluctant to comment on some aspects of my experience as a college hire because there have been changes in the hiring and training procedures for college graduates in recent years. I decided to include these comments because I believe many of the changes were not made for philosophical reason but for budgetary ones, and that some of the procedures in practice when I came on board might be reinstated. In fact, I recently heard that the LIC (Limited Interim Clearance) hiring program which was in effect in the mid-60's is to be revived, and that the intern program will again be restricted to college graduates. Thus my experience might be very relevant for FY-75 college hires.

The method by which college hires were oriented and selected when I arrived ignored one characteristic of most recent college graduates--they honestly want to work and want to sink their teeth into a job. We were immediately put into a three-month orientation course taught for the most part by other recent hires who had not been cleared by the time they finished the course and were consequently promoted to instructors. Since the ink was barely dry on our diplomas, the last thing most of us wanted to see was another classroom, and having these people as instructors did little to change our feelings about that, or to instill confidence; we were taught elementary CA, TA and Signals Analysis in a manner that made those subjects seem as little related to anything in the real world as metaphysics had six weeks before. At the end of the orientation course we were asked to indicate the career fields we preferred, and depending upon the time of year and the number of vacant billets left, might get our first, second, third, or even fourth choice of assignments.

Then the orientation process shifted almost 180 degrees. All recruits were fully cleared when they came on board, and those who were to be interns were hired for a specific intern program. If a college recruit came in with a group of other college hires he might get as much as two or three weeks of orientation before being put to work, but frequently he was turned over to his panel office to begin his new assignment with no more than a briefing on the relative merits of Blue Cross over GEBA, the Agency structure, and how to report in on sick leave. For a more complete orientation he was at the mercy of the panel office, and more directly, the organization he was assigned to; it might be months before the work meant anything to him.

We may now see a revival of the three-month orientation class, but an alternative that would probably be better for both the Agency and the employee than either of the above methods would be to enroll new people in a two or three month's work-study program, with half the day in a class room and half in operations. (In TA work, for instance, I know from personal experience and contacts with other interns that there are areas that have backlogs of routine TA work, callsigns to be broken, work to be done on frequency rotas, etc., that could be done by novices with a minimum of instruction.) This would satisfy the new hire's desire to be productive and would at the same time make the course work more meaningful.

A variation of this proposal would be to give the new hires the self-study course Introduction to Cryptology (CY120) and put them in an area where they could observe a number of skills being practiced, with one analyst designated to serve as a reference point if trouble spots with the course came up, as well as a guide to what was going on in the area.

I would enroll every new employee in at least two of the following courses: Basic Traffic Analysis (TA 100), Introduction to Manual and Machine Cryptosystems (CA015), Introduction to COMINT/ELINT Technology (EA010), and Introduction to Computer Science (MP160), during his first 18 months at the Agency. This would provide him with more information on what field he might be best suited for, while giving him an appreciation of other disciplines. I would have him tour the agency to actually see how materials come in, how they are disseminated and how the finished product leaves the building. Some employees who have been here a number of years have only the vaguest idea of what happens to their product once it leaves their desks.

The hires who had specific skills would be assigned to areas that would make use of them; those who did not would be given assignments based on the testing described previously. While I would attempt to make use of existing skills, I would classify all new hires by a general term, such as "SIGINT Technician," rather than immediately identifying them with a specific career field.

I would not put any new hires directly into an intern program. Many college hires who went directly into a program, as I did, felt that their first 6 to 12 months were not as meaningful as they could have been because they didn't really understand the Agency's organization or operations for that period of time. A study conducted last summer raised this question and concluded that college hires should not be required to begin with work in an operational assignment. I'm not sure of the reasoning that prompted that conclusion, since the study stated that most of the managers and executives favored direct assignments, and the interns were divided on the question (in general, SR and TA interns favored direct assignment while CA, DS and Language interns did not).

Under the system I propose, new hires would be eligible to apply for intern programs after 12 to 18 months in their assignments, and no organization would be permitted to hold a candidate who had been accepted. By that time the hires would have an idea of what fields they were really interested in, while for their part the panels would not have to choose between "related experience" and academic training, as they often do now in selecting interns from both on-board and college hire candidates.

(To avoid the possibility of new hires being stuck in a corner somewhere and never even hearing of the intern program, Personnel could have a follow-up interview with them after they had been on the job for 12 months - at one time this was done routinely, I believe--and as part of that interview, explain the possibilities of the program.)

This would also alleviate some billet planning problems for the panels. Currently, as a panel executive with 8 vacant billets and 7 promising on-board applicants, would you go ahead and select all 7 or try and keep some billets open in case there will be an active hiring program for your field which will produce applicants you will be interested in hiring?

The method of having new hires work for a year or so before putting them into an intern program might solve several related problems:

1. It might weed out of the program the uncommitted who had no idea whether they wanted to stay six weeks, months, or years.

2. It would avoid the danger of identifying new employees too quickly and irrevocably with one career field. I and some of my friends shared similar experiences in this respect. After periods ranging from six months to a year as interns, we felt that we were not really in the right niche. Several of us discussed these feelings with representatives of Personnel and our respective panels. In each case we were told that we hadn't really given the field a fair chance, and that it usually takes several years on the job to begin to feel at home. We followed the advice, but when things didn't look any more encouraging after another 8 to 12 months we returned to our advisors. At that point we were told that since we had completed more than two years of our internship, the Agency had invested too much time and money in training us in our current field to let us transfer before graduating and trying an operational assignment in that field. Apparently there is a month or a week we missed when these people would have agreed that we had spent enough time in the field to give it a fair chance, but not too much to transfer!

(This touches on a related problem. Some supervisors seem to feel that if a subordinate requests a release it is a negative reflection on them, that their authority is being threatened or that their cache of talent will dwindle away. Whatever their reasoning, they seem to be more willing to see an employee resign than to see him go elsewhere in the Agency. Some applicants for an intern program have been misled about it, some have been given unjustifiably negative evaluations, and some even warned that if they are not accepted for the program they may regret having applied for it. My own single experience in getting a transfer was so frustrating that I now appreciate why some people spend 30 years on the same job!)

3. It would make for more realistic career development. I believe that the college graduates who came to the Agency in the late 60's began careers that were too heavily "front loaded" as far as rewards were concerned. Thirty-eight months after I came on board I was certified as a professional analyst (through no special effort on my part) and had received two promotions. This is pretty heady stuff, and is another reason why some interns in those fiscally carefree years saw themselves as "Future Super-Grades." In addition to automatic promotions and, in the case of some panels, almost automatic certification, we received virtually every course we requested. Some of us also had opportunities for downtown or overseas assignments. During all this, we could do as much or as little as we wanted. It was virtually impossible to be dropped from a program, despite instances of low and even failing grades and poor performance. This "front loading" did two things: one was to take new hires who began

as ambitious workers and demonstrate that they could have all the rewards of effort even if they did not elect to put forth very much. The second was to create a sense of disillusionment when the pace slowed -- as it had to, even if the money had continued to flow, simply because there are only so many grades in the GG scale.

(The above picture may seem far removed in these more austere days of 1974, but I believe there is a proposal under consideration now to promote interns when they are approximately halfway through the program, if they meet the standards established by the panels, and to graduate them as GG-11's if they meet certification requirements. While the association of such standards with intern promotions is a definite improvement, it could be the first step toward reestablishing the old norm of two virtually automatic promotions for every intern.)

4. It would make the OJT supervisor's job easier, particularly when on-board interns or military convertees are involved. Interns were initially a fairly homogeneous group, and the supervisor had a pretty good estimate of the type and amount of guidance he would have to provide for those coming into his area. While the stereotype of interns as twenty-one to twenty-four-year-old, bright-eyed recent college graduates (typically women) persists, the fact is that in recent years on-board employees have been a prime source of input for some panels. The interns of one panel were studied and it was found that men outnumbered women 2 to 1, that the age range was 23-37 (meaning that some supervisors had to wait to tell their war stories until they had heard the interns') and that both the mean and median age were 30. The amount of Agency experience ranged from less than one year to 17 years, with 6 the average and median number; but over half the interns had prior government or military experience, which brought their government service to an average of 8 years. Only 17 per cent were direct college hires and only 50 per cent college graduates.

Such diversity puts a considerable burden on the supervisor. One month he has Bill Brown reporting to him, just after graduation with a degree in comparative government and no work experience other than being a summer camp counsellor. Bill is intrigued by his new environment, and would willingly listen to explanations of what NSA is all about from dawn to dusk. The next month he gets John Smith, who has converted from the military and has a total of ten years in the SIGINT business (two more than the supervisor has). Smith is already certified in another field and is ready and more than willing to fill in for the boss should the need arise. The supervisor may not even know ahead of time which type he is getting. It takes adaptability and resourcefulness to tailor a tour to interns with such diverse backgrounds--and the wisdom of Solomon to write their performance appraisals.

The recent ruling that the program will again be limited to college graduates, coupled with the revival of a college recruitment program, will very likely do much to reduce this heterogeneity; however, I believe that the situation I have just described merits study by Agency managers because it invites questions such as: (a) Why does someone with many years of Agency experience apply for an intern program? (b) Who should be considered "overqualified" for an intern Program? (c) Was the ruling that interns will now be required to have a degree based on a study of the performance of interns who do not have a degree?

My own feelings concerning these questions are as follows:

(a) Since the intern program is the only comprehensive formal training program the Agency has at the technician level, on-board applicants have tried to become interns for a variety of reasons, such as getting popular training courses, satisfying a desire for diversification, escaping from an unchallenging or dead-end position, becoming certified in the shortest possible time, etc. In short, the intern program has been viewed as the solution to a number of problems technicians have. I do not think that it is reasonable to expect to satisfy the needs of the veteran and the new employee through one program; Agency and employee needs would be better served by differentiating levels of training. As mentioned previously, I think every new employee should be given introductory level training in several fields. Those selected for the intern program would then already have some of the courses required of most interns, and the level of training provided through the intern program could be raised to that of an intermediate level training program. This might also alleviate the problem some panels currently face of interns who have completed the program but who can not be certified because they can not pass the PQE. While some Panels are searching for the course or the type of assignment needed to correct this problem, I think the answer is that the intern should dig deeper into the field.

(b) There are currently varying, even conflicting, schools of thought on who should be considered "overqualified" for an intern program. Some panels seem to exclude the candidates with the best potential for success. For instance, a college recruit coming into the Agency with a master's degree in data systems is automatically certified, and therefore is not considered for the data systems intern program, while a recruit with a degree in English may be accepted. This means that the data systems

major does not get the benefit of the variety of operational tours and training courses that his new colleague does. Similarly, the college graduate linguist who converts from the military is likely to be considered overqualified for the language intern program, while the girl from Sunnyvale Academy is readily taken in. (However, the military convertee could apply for the SR program and, until very recently, probably would have been accepted.)

(c) Since the study that was done on the intern program last year did not indicate that the performance of hires who went directly into the program was superior to that of on-board interns, I would advocate further research before re-imposing the requirement that all interns must have a degree. For some fields a degree is more relevant than prior cryptologic experience, but for other fields the reverse is true. I am concerned that a blanket requirement for a degree will eliminate some good candidates for the program. In fact, the program initially did have a requirement for a degree but it was removed several years ago because of a number of high quality on-board applicants who did not have a degree.

To summarize: Given the goals that have been set for the intern program, I would establish the following entry requirements: (1) a score of 5 or above in the applicable CQB category, (2) grades of B or better in course work at the National Cryptologic School, (3) performance at or above the "strong" level during an initial 12 to 18 months' assignment in operational work. I would put the people thus selected into a two-year program, beginning with broad exposure to a particular field and becoming increasingly specialized as the intern progressed. At the end of the two years the interns would be returned to operational work, with the understanding that at a later time--perhaps a minimum of three years later--their records and those of other qualified employees would be reviewed, and that at that time, depending on the size and future needs of their career fields, some of them would be invited back for 12 to 18 months of additional training--either advanced technical courses or management training.

(Next issue: Motivation and Morale)

(UNCLASSIFIED)

NEWS FROM THE SCHOOL

EO 1.4.(c)
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AGENCY RESUMES HIRING OF LIC'S

In recent years most new NSA employees have had to be fully cleared before being hired, but employees who came in in the middle 60's will remember the initials L.I.C, which stood for "Limited Interim Clearance," and for an arrangement under which new hires not yet fully cleared were brought into the Agency and put on the payroll while awaiting final sanction. This arrangement is now being reactivated, and several hundred recruits in critical skill areas (primarily language, certain fields of engineering, and mathematics) will be hired under it.

The School, which is tasked with keeping them usefully occupied while awaiting final clearance, has worked out a course of training which will give the new hires a good background in cryptologic and intelligence work. The first phase is expected to last about 9½ weeks. Some of the material studied will consist of standard School courses, such as MP-060 (Survey of EDP), TA-100 (Basic Traffic Analysis), and CA-105 (Introduction to Manual and Machine Cryptosystems), for which the the students will receive Agency credit and which will count toward eventual certification. By the end of the course, says [redacted] Chief of E33 and Project Officer for the program, "the LIC's should have a pretty good idea of what the Agency and the intelligence community are all about."

NCS OFFERS COURSE IN "SIGINT APPRECIATION"

Over 300 DIA intelligence analysts will be attending a special course at NCS this fiscal year to learn more about SIGINT processes and analytic techniques.

It all began when Dr. Hall, Assistant Secretary of Defense for Intelligence, looked over the post-mortem reports of the USIB Intelligence Committee [redacted] He felt that DIA analysts needed to be "cross-trained thoroughly in the use of SIGINT sources so that they /could/ understand its capabilities and become familiar with the methods of SIGINT analysis and with the modes and highly specialized terminology of SIGINT reporting."

To meet this need the National Cryptologic School has organized a one-week course, SIGINT Exploitation for User-Agency Analysts (CYZ-600) to be presented once a month at FANX II for about 35 persons. (Please note that enrollment is limited to non-NSA personnel).

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~~(CONFIDENTIAL/HVCCO)~~

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COMING EVENTS

nsa computer & information sciences institute

Dr. HARLAN MILLS of IBM
an authority on Structural Programming & Software Engineering will address CISI on
Thursday, 17 Oct 74 Ø93Ø
in the NSA Auditorium

Dr. EUGENE BOLD, P13D
will address CISI SIG/IPS
Wed 3Ø Oct 74 Ø93Ø
on DATA STANDARDS.

CRYPTO-LINGUISTIC ASSOCIATION

will present

Mr. CLIFFORD B. GROCE
Deputy Program Manager, VOA
speaking about
THE VOICE OF AMERICA
&
Dr. ROBERT J. HERMANN, DDR
discussing R&D and Its Impact on Language Processing in the Future
&
Brigadier JOHN H. TILTMAN
who will recount SOME MEMORABLE CRYPTOLINGUISTIC EXPERIENCES

Dates to be announced

The CRYPTO-MATHEMATICS INSTITUTE
announces

Dr. PHILLIP CHASE, R1
SPEAKING ABOUT
SUBSEQUENCES
Thursday, 7 Nov 74 Ø93Ø
AND
Mr. CHARLES BOSTICK
speaking on a classified topic
Thursday, 5 Dec 74 Ø93Ø
BOTH OF THESE LECTURES WILL BE GIVEN IN THE NSA AUDITORIUM

The INTERNATIONAL AFFAIRS INSTITUTE
Speakers:

Tuesday **29 Oct** 1330 hrs
Ambassador ARMIN MEYER
Former Ambassador to Lebanon, Iran, and (most recently) Japan
TOPIC:
US-Japanese Relations

rsday **5 Dec** 1330 hrs
Dr. ROBERT SLIGHTON
The National Intelligence Officer for Economics
pic:
Economic Intelligence
IN THE NSA AUDITORIUM

The COMMUNICATIONS ANALYSIS ASSOCIATION
is considering a "partially subsidized" LUNCHEON soon.
WATCH FOR ANNOUNCEMENTS!

und don't forget das Oktoberfest
12,13,14 October
Rear NSA Parking Lot

THE [redacted] EXERCISE

A CASE STUDY IN SPECIAL RESEARCH ANALYSIS

by VERA R. FILBY E12

This article is adapted from a report-writing exercise formerly used in the SIGINT reporting course. It is presented here as a case study in COMINT analysis, research, and reporting, not only for SRAs but also--and even more--for the purpose of showing readers not well acquainted with the SRA field some of its variety and complexity, its frustrations and rewards. The message around which it centers and all the research data are authentic. (Except in the message itself, Cyrillic letters have been transliterated into English letters for the purpose of this article.) Some Agency organizational elements and procedures have changed since this was written, but the essentials of special research, analysis, and reporting remain the same, and the "case" described is not at all untypical.

Here, then, is a day (and then another) in the life of an SRA.

[redacted]

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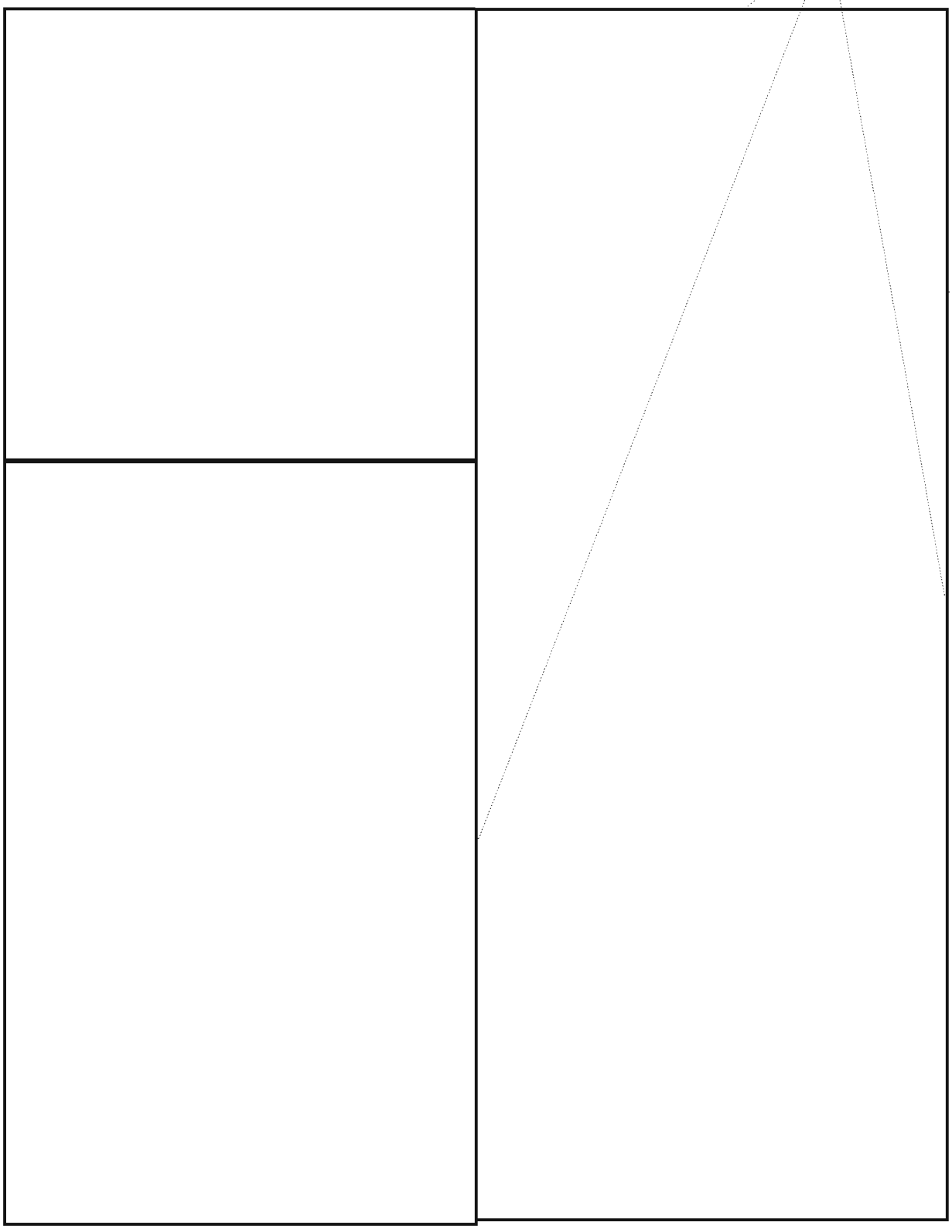
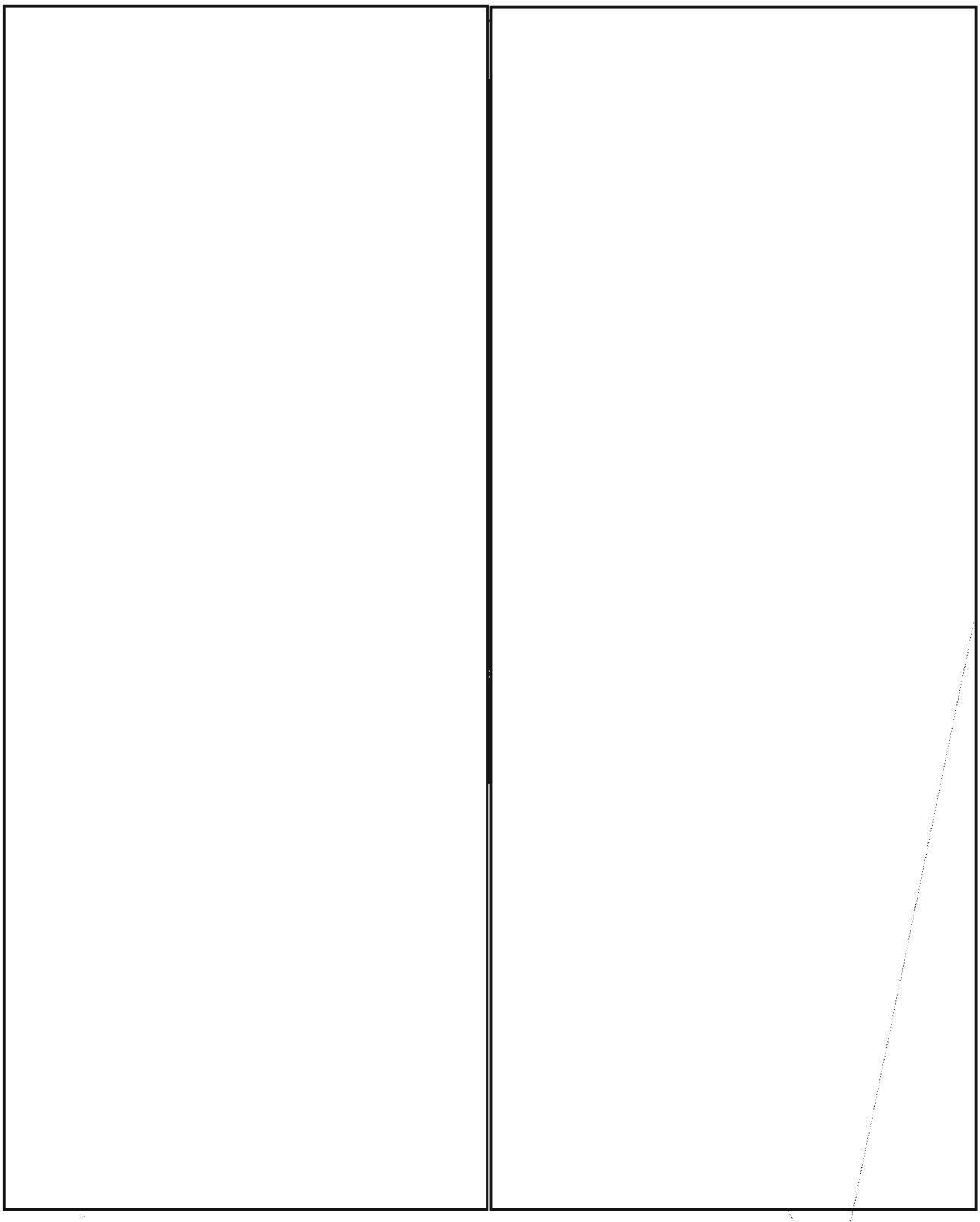
P.L. 86-36





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[redacted]

~~(TOP SECRET UMBRA)~~

Subject: SRA SYMPOSIUM
To: Mr. [redacted] c/o Cryptolog P.L. 86-36

I highly endorse your proposal on page 20 of the first issue of Cryptolog to hold a two-day or two-and-a-half day seminar for Special Research Analysts. Almost every professional community, including its subspecialists, needs this sort of thing to heighten professional awareness and to promote the (cryptologic) commonweal. I would be willing to present a short paper on techniques of tactical SIGINT reporting and integrated intelligence support in the tactical situation or a short paper on how to report when you have a reportable item at a collection site but no authorized reporting vehicle into which the substance will "legally" fit.

[redacted]

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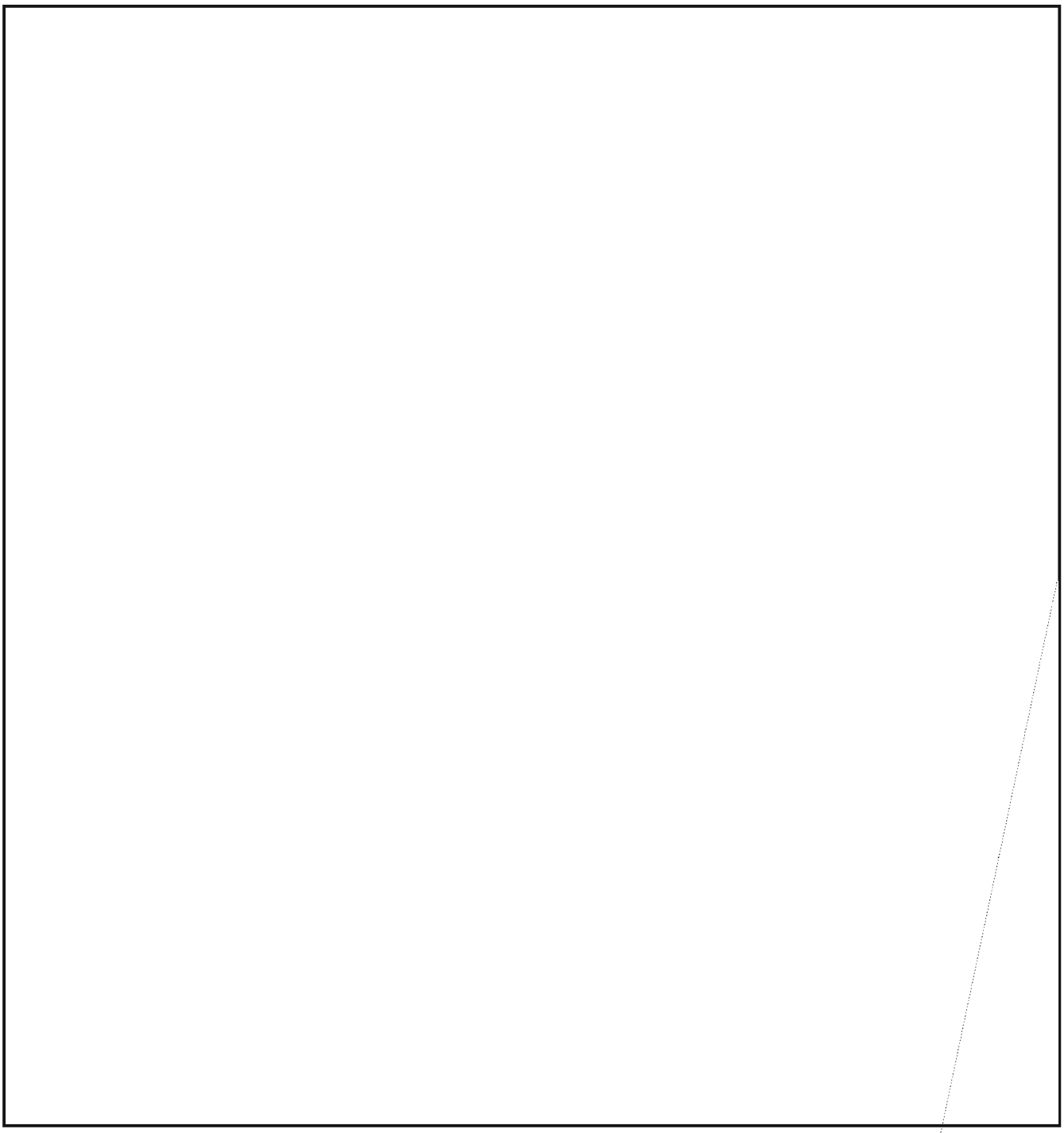
/s/ [redacted] P.L. 86-36
SIGINT Directives Staff

OCTOBER OVERLAP

by [redacted]

P.L. 86-36



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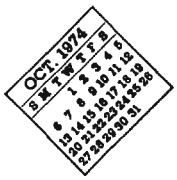
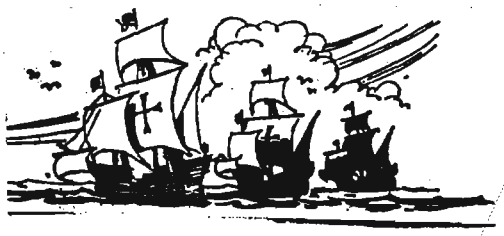
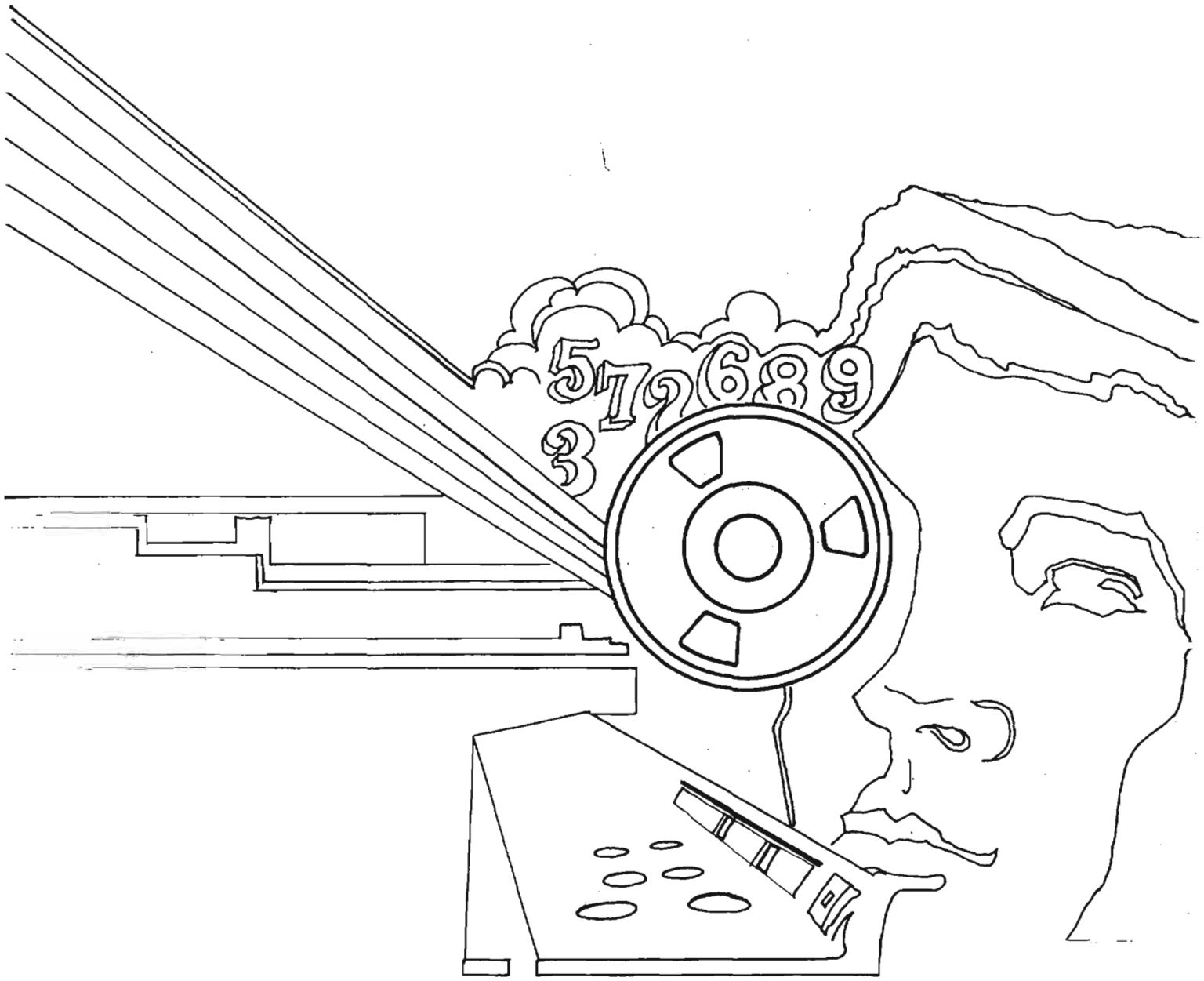


(Answers next month)

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