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	YOU'RE NOT GOING TO BELIEVE THIS, BUT IT'S
	ANOTHER LAST WORD
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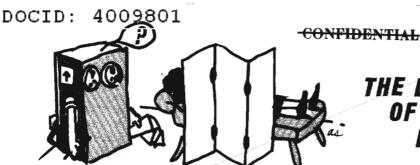
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thoughtful review of Joseph Weizenbaum's Computer Power and Human Thought (see "Another Controversial Book on Artificial Intelligence," CRYPTOLOG, May 1977) is an outstanding contribution which merits both praise and attention.

It is easy to agree with Weizenbaum that proponents of Artificial Intelligence (AI) have made unsubstantiated claims. I am doubtful about the merits of his proposition that some things computers could do are morally wrong, and should not be programmed. As an example, Weizenbaum equates treatment of mental disorders by prefrontal lobotomy, a drastic and somewhat discredited surgical procedure, with treatment of the same by a computer program. He says "machineadministered psychotherapy would induce an image of what it means to be human that would be prohibitively costly to human culture." In so saying, Weizenbaum shows that he is still suffering from cultural shock induced by his secretary's asking him to leave the room while she was "talking" to his ELIZA computer program running in DOCTOR mode.

It is likely Weizenbaum missed the real significance of the incident. The nature of DOCTOR is to reflect the user's thoughts, when supplied as input, back to the user. Like any other computer program, it manipulates data but originates nothing. When the user inputs personal items, the DOCTOR program returns them in various noncommital formats which often stimulate the user to further thoughts. The user need not have a "demeaning image of what it means to be human" to use DOCTOR in this manner, and if the input includes personal and confidential material, an instinct for privacy is natural.

As a crude analogy, a tennis player practicing against a wall finds all shots being returned by the wall in various patterns. The dialogue with the wall may help perfect the player's technique. If the player is not an expert, a desire to practice in privacy without spectators is only natural. DOCTOR is a more clever construct than a wall but it serves an analogous purpose under the proper circumstances, when used seriously and not for laughs. In neither case is the wall or program contributing any original values to the physical or mental exchanges taking place.

This brings us to the basic impasse in AI work. You can describe a problem or, even better, a situation, and ask a person, "What do you think about it?" To ask the same question of an AI computer program is an almost meaningless gesture. At best the program may have been pro-

THE DOCTOR IS IN(CAPABLE OF DIAGNOSING) Russell Chauvenet, P12

vided with means to print out "Insufficient data" when not specifically assigned any task recognizable to the program.

Consider the practical problem of diagnosing some traffic received in a new crypto system. The human analyst looks over the material and develops from experience and judgment some feeling for what kinds of systems might be involved. A set of statistical diagnostic routines is specifically selected by the analyst. Each routine accepts the given data and returns the specific analysis requested, within parameter limits the analyst has chosen. The results are considered and other tests are made, and if a hypothesis occurs to the analyst for which no ready-made program exists, then the needed program is created for the job.

But if an AI program were to be attempted, the lack of motivation, judgment, and original thinking provides built-in limitations to the project. We can think of the "AI Diagnostic Program" as a main routine having access to all the known diagnostic subroutines, but if we intend to submit batches of unknown traffic and ask for a report on the system underlying it, we have to supply all the "motivation" ourselves. The main program can be told to try various subroutines, but if we forget to put in an instruction to call the δ I.C. routine, the "AI program" is not going to notice the omission and remember to call the subroutine we didn't tell it to use. Nor is it easy to imagine the "AI" routine digesting the results of the subroutines used so far, deciding that some new test is needed, and creating the routine to do that test. The coding may exist in "AI" to accept, for example, our instructions to create a δ I.C. routine, but we have to supply the rules and, if we make a mistake, "AI" will probably not know the difference.

The drift of this argument is not that it is wrong to work towards AI, as Weizenbaum seems to think, but it is generally unproductive.

The neurons in human brain cells are not off-on flipflops or +/- magnetized spots. We do not think in binary arithmetic. Weizenbaum is probably right in feeling that an attempt to make computers simulate human thinking is singularly futile when we don't really understand the processes involved in human thought.

The moral is, then, not that AI is wrong, but that it is unrewarding. We can get more for our money by using computer programs as our tools, discarding (for at least some time to come) the fanciful AI concept.

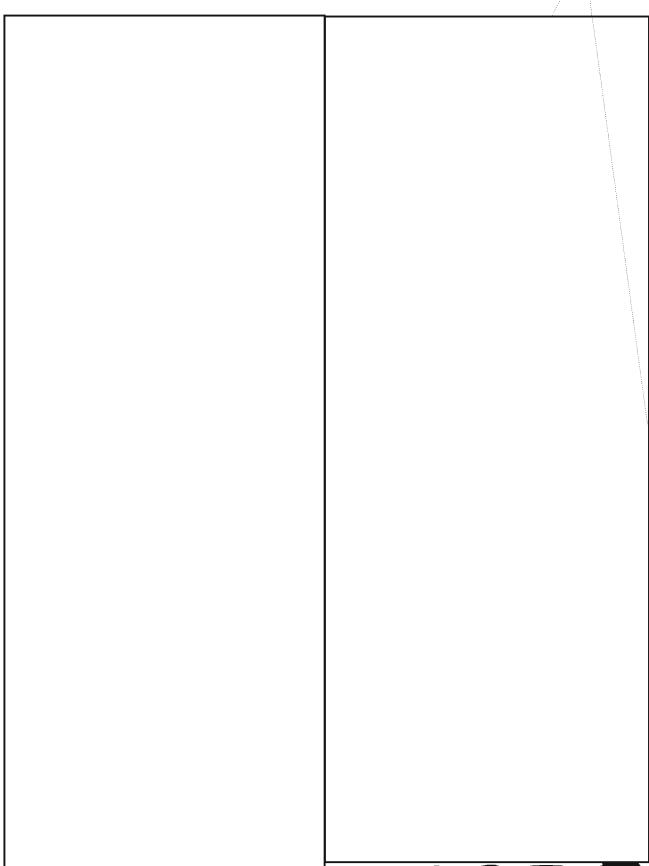
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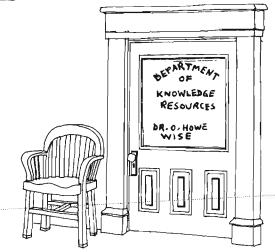
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KNOWLEDGE RESOURCE MANAGEMENT AT N.S.A.



P.L. 86-36

R532

recent R5 Technical Report* proposes the concept that knowledge is a basic resource of the National Security Agency, and computerized systems can play a key role in preserving and manipulating much of this valuable resource in a process called Knowledge Resource Management. The paper

- identifies several problems with the current mode of operations;
- presents a theory of knowledge and argues why knowledge should be treated as a basic resource;
- introduces some new technology and identifies some areas where further research is required; and
- proposes a system architecture for implementing knowledge management in a distributed heterogeneous computer network environment.

The knowledge-related problems which are addressed in the paper include:

- the increasing costs associated with producing intelligence information;
- sharing data in a heterogeneous computer network, requiring analysts to master a large variety of user interfaces (essentially, one for each data base and file);
- inadequate problem-solving support from our computer resources;
- the continued loss of analytic expertise through attrition; and
- the need to preserve more of the knowledge acquired by these analysts for the use of those left behind.

The knowledge-theory section presents a taxonomy of knowledge which identifies and distinguishes among factual, procedural, and judgmental knowledge in order to define what constitutes the Agency's knowledge which is to managed.

Factual knowledge deals with facts (or data) and their interrelationships. Procedural

*Managing Knowledge as an Agency Resource, R53/08/76, November 1976, S-215,904 (TSC).

knowledge includes the algorithms and heuristic methods which our analysts use to solve problems employing this data. Judgmental knowledge involves the constraints and goals which are used to direct the Agency's problem-solving behavior. A basic tenet of knowledge resource management is that these various forms of knowledge should be maintained independent of one another to effect knowledge sharing, to improve manageability, and to reduce costly duplication.

The theory of knowledge resource management relies heavily on the basic concepts of database management, but attempts to extend these concepts to include more than just managing data. The three-schema view of ANSI/SPARC (internal, external, and conceptual schemas) is investigated and the human roles of applications administrators, data-base administrators, and an enterprise administrator are examined. A new technology called Knowledge-Based Systems is introduced, which may provide some of the problem-solving support needed by our analysts. A set of user interfaces is also presented and explained.

The paper suggests a methodology for managing knowledge as a basic resource. The methodology includes an architectural model for knowledge management which defines a role for existing software technology such as data-base management systems, knowledge-based systems, applications programs, and user interfaces. Finally, some on-going and planned research activities in the realm of knowledge management are described.

Several contractual efforts are currently underway to evaluate the knowledge-resource concept and the proposed architecture, to develop some of the advanced user interfaces, to investigate the application of knowledge-based systems to NSA problems, and to develop a canonical representation for data which can be used to facilitate data sharing among different data bases.

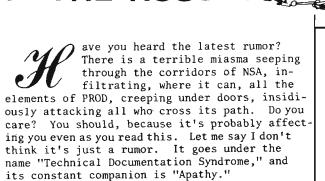
Copies of the report have been widely circulated throughout the Agency. Additional copies may be obtained from R53, x5504s.

SECRET SPOKE

B311

asks

"IS THERE A DOCTOR IN THE HOLE



For some time now I have been concerned with the lack of technical reporting and documentation, and if the examples I use appear to have

We have all heard, ad nauseum, that "Product is our bread and butter," and without it we'd be out of business. Now, I wholeheartedly agree with this. However, which comes first, the chicken or the egg?

In order to write the product, someone has to perform some analysis. In many cases it's easy for the problem-wise analysts to recognize unusual activity and to issue appropriate product, but the job shouldn't stop there, although, all too often, that's just where it does stop.

When it does, inevitably, back come the questions:

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TRIBUTE TO THE GURU



n 1956 Lambros D. Callimahos originated, and began teaching, course CA-400, "Intensive Study Program in General Cryptanalysis." Since that time there have been 32 classes -- all taught by the Guru (or Spiritual Leader) himself -- with 271 graduates (30.3% female). A complete tabulation of the graduates who are no longer with us (because of retirement, resignation, military reassignment, etc.) shows a remarkably low attrition rate during the 22-year period -- 26.2%, or 1.2% per year.

It has been suggested that the cement that binds together the graduates of Course CA-400 is the Dundee Society, which was founded in 1968. That society (named after the Dundee Marmalade jar in which the Guru keeps his pencils) consists of graduates of the course, who meet annually to salute the graduates of the current course. Each year, also, the society inducts an honored personage as an honorary member. At the June 1977 graduation luncheon, Admiral Stansfield Turner, USN, Director of Central Intelligence, was inducted into the society while the graduates of Class 32 sang, to the tune of the well-known Gilbert and Sullivan air, "And Now He is Director of the C-I-A!"

The graduates of Class 32 also prepared, for presentation to Mr. Callimahos, a "monograph" in which they recorded their many hours of hard work and hard fun, and their affection for the Guru and their Guru ii (or Deputy Spiritual Leader)

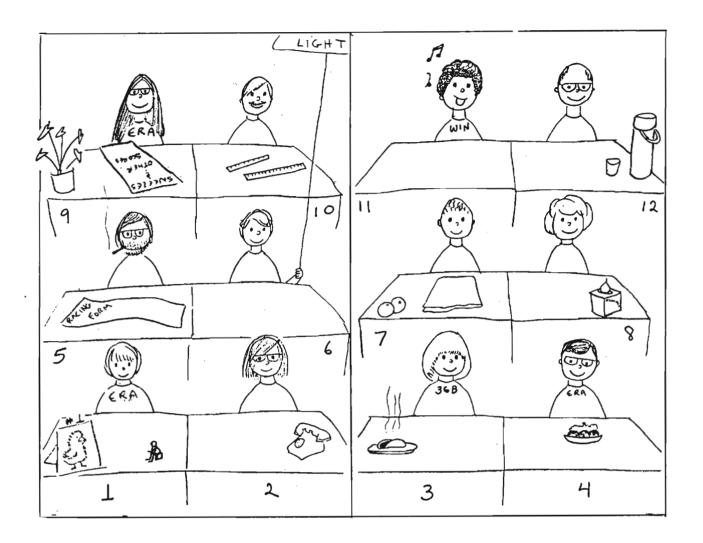
their Guru-ji (or Deputy Spiritual Leader)
The following pages contain a few excerpts and drawings from that "monograph."

Monograph Dedication

This monograph has a two-fold purpose. It is intended not only as an item of memorabilia for Class 32, the Great One, and the Near-Great One, but also to illustrate the qualifications of this nonpareil class to serve as a paragon for future Dundee aspirants in their pursuit of cerebral enlightenment, cultivation of raunchiness and bad puns, and kissing habits.

The monograph is dedicated of course to our Guru and Guru-ji, who inspired us to greatness.

Class 32



On 7 February 1977 Class 32 of the muchheralded CA-400 class began. Handpicked by none other than the Guru and Caudillo himself (otherwise known as Lambros D. Callimahos) the class commenced an effort to prove itself worthy of membership in the elite Dundee Society.

In an attempt to document the many and varied accomplishments and experiences of Class 32, this document has been produced to emblazon forever in the annals of cryptologic literature the "rising to the task" and completion of the rigorous CA-400 course.

Prior to revealing the many unique and wondrous talents and attributes of the class and its unique individuals, some demographic data pertaining to the class as a whole will be provided for those with a statistical inclination (or interest, as the case may be). Note that the class roster is included as Appendix 1 for reference and further details.

Category

Statistics

Age

Total - 395; mean - 32.91; range -- 30-48

Grade

Total - 127; mean - 10.5; range - 9-13

Marital status Married - 9; single 3; range --

none to twice

Sex

Yes, 6 male, 6 female (Note 1: WIN proponents please excuse this category.) (Note 2: Class members claiming other than "male" or "female" were considered "liberal"; however, for purposes of this document, they were placed in either male or female categories based on physical appearance, style of dress, or other identifying characteristics. Range - no comment.

Children

Total - 12; mean - 1, 8 boys, 4 girls; range 0-4

Education

Total years in school - 180; mean -3 years of college; range - high school graduate to Master's Degree

Certification Total - 13; mean - 1.08; range -

Years of NSA service range - 5-22.

Parent state (place of birth) Virginia - 1; West Virginia - 1; Pennsylvania - 1.

Political Liberal - 3; conservative - 4; philosophy moderate - 4; abstains - 1.

Enough dry statistics!!

As previously mentioned, certain characteristics were identified with class members and thus set them apart as a unique entity within a unique entity. Although not mentioned by name, correlation of the following information with other data and the pictures contained in this document will reveal the person's identity. (Concomitantly, match letters with numbers appearing in Appendix 1.)

Mystery	•
<u>lette</u> r	Characteristic(s)
A	a singer? and lyricist? and official raspberry
В	dog, newspaper, oranges (has a lot of a "peel")
С	sends (Playtex living) support through the mail
D	two rulers and no shoes
Е	Grand Marshal Captain Sleaze, the burlesque's squeeze
F	incorruptible, coffee-thermos kid
G	double dipper but hold the cones!!
Н	"Sneezy" (allergic to her partner?)
I	the creative caricaturist that has great leggs
J	the mover, and future author of the book Moving to a New Home and Its Effects on Marriage
K	winner of award for "receiving most phone calls, or the COMSEC kid
L	red hair, position second to one, polished prose, WHAT??
М	give me liberation, down with Bryant, ban Gallo, save the trees, do you have a headache?
N	the dispenser of knowledge who speaks with white tongue OH!!

Class 32 was also given credit for a number of particularly unique qualities which set the class apart from all others. In the words of the Guru himself, Class 32 was cited for its "unity," "bussing," "raunchiness," and "perhaps not the most entertaining, but certainly not far behind."

Chronological sequence of class: With nose to the grindstone, under the tutelage of the Guru and Guru-ji (otherwise known as Bruce.

	Class 32 galloped through the halls of learning and knowledge, moving right along until finally the Zendian foe was met. Mobilizing Task Force Pearl (see Appendix 2 for order of battle), under the direction of General and Ensign the assault on Zendia began, with success finally gained as succumbed. Thus concluded the preliminary portion of the CA-400 course. The final week was more than intellectually stimulating and was accomplied with the utmost fervor and zeal (cough!). As the sun sets on the CA-400 Class 32, the participants return to the Realm of the Unknown to apply the knowledge and many new capabilities which they now possess. With sincere affection
	and utmost respect the Class 32 members bid the Guru and Guru-ji fond farewell and "nighty-nite!"
	Appendix 1
	CA-400 Class 32 Roster
!	2. 3. 4. 5. 6. 7. 8. 9. 10. 11. 12.
	Guru-ji - Lambros D. Callimahos
	Appendix 2 U.S. Task Force Pearl (Every One a Gem)

Appendix 3

Sneezes, Scores, and Other Pertinent Data

Student number: 1 2 3 4 5 6 7 8 Sneezes: 14 8 0 27 0 0^* 1 160^{**}

9 10 11 12 G-I G-II 32 107 95 14 0 9

Office next door Other class $\frac{2}{4}$

Vampires Movers

*But many giggles
**Includes 2 unofficial sneezes
in CA exam

Sneezes by 10- Front Middle Back Right (devil's) cation: row row row side side side 49 161* 248 161 297

*Only 1 was not Student #8

Sneezes by

day of week:

M T W Th F 88 103 121 87 76

Student number: 1 2 3 4 5 6 7 8 Score: 0 -25 -2 -35 -105 0 -90 -15

9 10 11 12 G-I G-II +4 -125 0 -5 -5 -16 Note: All scoring is purely objective. Scorekeeper is #9.

Scores are awarded mostly for sexist remarks, and occasionally for general raunchiness.

Other pertinent data:

14 March: 2 bad puns from Guru-ji. Later puns became too numerous to record.

21 March: Student #9 had hiccups.

23 March: Student #7's single recorded sneeze was with potato chips.

31 March: Student #8 had a fit.

7 April: Student #4 applauded for "Uncle Walter's Dog. . ." Student #11 applauded for "Union leaders make good

targets. . ."

5 May: Student #10 was leading sleaze.

6 May: Guru-ji received -50 for lascivious "Hubba-hubba," but redeemed self by

removing his shirt.

7 May: Student #1 called "Good Cryppie" by

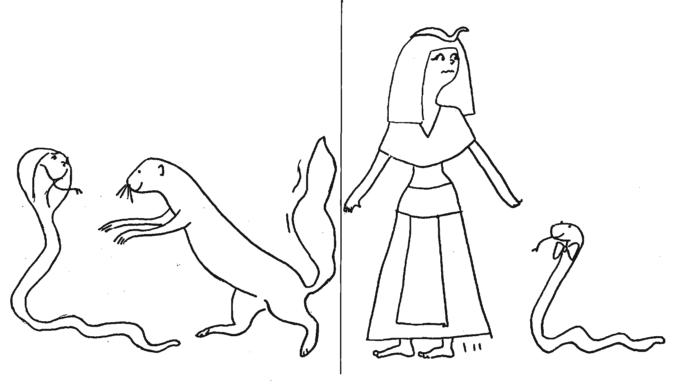
Mike What's-His-Name

24 May to

6 June: Guru has hiccups.

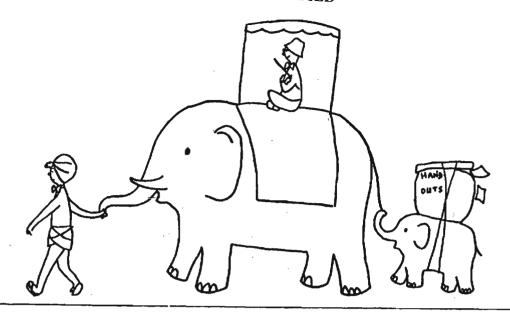
8 June: Guru and Guru-ji unofficially receive

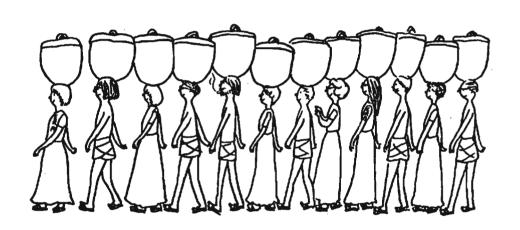
-100 points apiece.

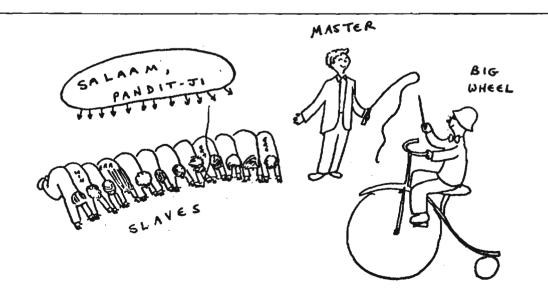


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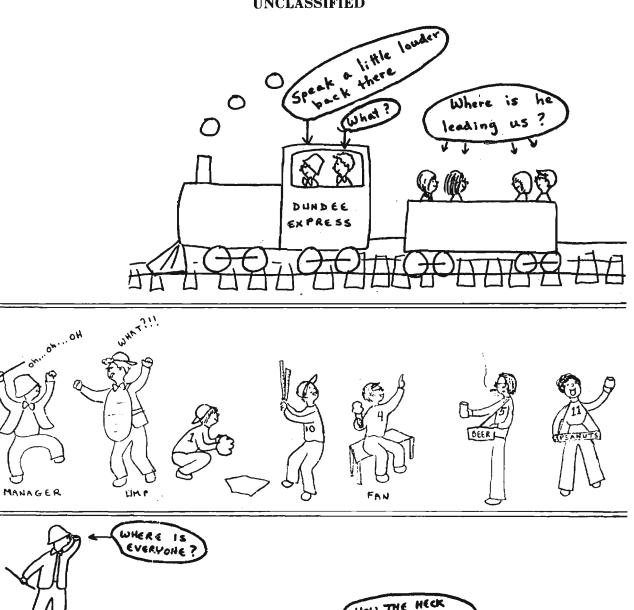


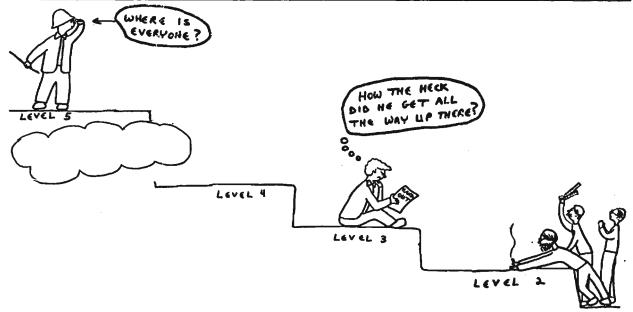


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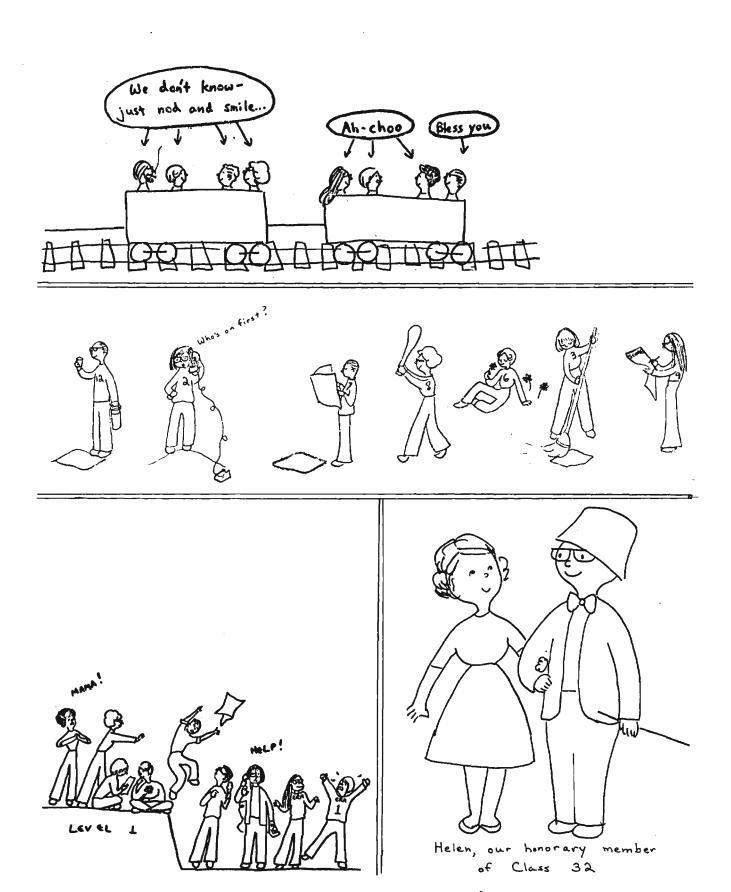
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The drawings and excerpts from "Monograph 32" which are reproduced on the preceding pages attest to the high professional regard and personal affection that the members of Class 32 feel for Lambros D. Callimahos. Those feelings are shared by 22 years' worth of graduates of CA-400. The following statements by just a few of the 271 graduates show that the members of Class 32 have lots of company in considering Mr. Callimahos to be their Guru.

Ed.

To the Man of Letters, the Flutist, Master Cryptographer, Epicurean, Gourmet, Keeper of the Key to Wisdom, Tutor of the Unlearned, and key to my personal successful career as Cryptanalyst, to my venerated mentor, Mr. Absolute, Lambros D. Callimahos:

Undaunted by my apparent unworthiness, Mr. Callimahos accomplished yet another of his unsung miracles -- he prodded me to the heights. I am one of the select few, a survivor of the tribulations of the "General Study of Communications," the hallmark class of the National Security Agency. Sir, I salute you!

Class 10 (1961)

CA-400 is an unforgettable experience. One of the fortunate ones, I took CA-400 when the class size was still very small. Only three other students and I shared a unique and uniquely qualified instructor for 4 hectic, glorious months.

The whole world of cryptanalysis opened up before us, past and present. We sensed continuity with history and tradition, yet felt the stimulus of new horizons and modern challenges. The wealth of cryptanalytic experiences and skills presented to us would have taken years to acquire on the job. Mind and imagination were pushed almost to the limit. We were encouraged daily to work harder and quicker, to accomplish more in less time than we would have believed possible.

All of this for an instructor who was always several steps ahead of the student -- however clever that student thought he might be -- and who combined teaching with a friendship with his students that endures long after the class has graduated.

CA-400 is one of my most treasured memories. I shall never forget it -- or the extraordinary man who taught it.

Class 14 (1962-1963)

Of the many and varied courses to relating to cryptanalysis, that teach principles of cryptography and techniques of analysis, none provides a philosophy of the art comparable to that of CA-400.

It is certainly true that, with a variety of systems and techniques an analyst becomes familiar with, the broader his outlook becomes as he applies them to the real world. Thus, with the personality of Mr. Callimahos to provide the philosophy, one should be successful in any analytic endeavor.

For me personally, what successes I have had as a cryptanalyst can be attributed directly to CA-400. This was, I believe, due to a feeling I developed about the particular system.

I have been back in the Training Department for 2 years as a cryptanalytic instructor. I am now better able to impart to a class, in some small way, this idea of a philosophy. Even though most or all of my students will never be cryptanalysts, the subject does provide a vehicle to form a way of thinking that can be applied to any science. I feel assured this philosophy that I can relate to others will never be outdated by technology or time.

C. E. Morrel1
Class 25 (1970)

Cryptanalytics taught by the Guru is an exhilarating experience, one that I shall never forget. I am convinced that those who share this same feeling have been strengthened by his teaching.

Lambros D. Callimahos gave me a confidence when I most needed it. He helped to sharpen my analytic skills, and the wisdom imparted by him will forever remain with me.

Class 10 (1961)

We were the Guru's first class to consist of 12 students. We became known as "Naughty 17," and until this very year enjoyed the Guru's recognition as "raunchiest class" (this year that distinction was won by Class 32). The heterogeneity of our demographic data certainly equaled that of Class 32 as described in its "monograph," and perhaps even excelled it.

The Guru taught us many things we had not even heard of before, including the correct names for various sizes of wine bottles. Together we explored the corridors of the "new" Training School, which had previously been the Fort Meade Hospital. Surely, Class 17 set a record for number of graduation parties which will stand for the ages, attributable to a certain natural sociability inherent in some class members and the air of camaraderie quickly established by our Leader.

Above all, the Guru gave us a crash course in how to use our brains, in how to derive pleasure from hard work, and how to feel true joy from technical success in our chosen profession.

Class 17 (1963-1964)



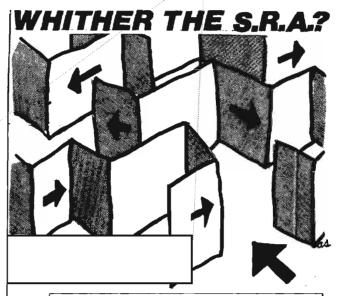
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grading and declassification at the earliest possible time. It includes a General Declassification Schedule (GDS) which allows for downgrading of TS to S in 2 years, S to C in 2 years, and C to U in 6 years. The GDS states that all classified information will be so downgraded/declassified unless it falls in one or more of the following categories:

- Information was furnished by foreign governments or international organizations;
- Information is specifically covered by statute (for example, Restricted Data or Formerly Restricted Data) or is informatation pertaining to cryptography or disclosing intelligence sources or methods.
- Downgrading/declassification would disclose a system, plan, installation, project, or specific foreign-relations matter the continuing protection of which is essential to national security.
- Disclosure would place a person in immediate jeopardy.

The exemption category 2 is most widely used by NSA and is generally construed to mean all COMINT Channels, codeword, ELINT, TELINT, and SIGINT related information. XGDS-2 is the abbreviated-version of "Classified by DIRNSA/CHCSS (NSA/CSSM 123-2), Exempt from GDS, EO 11652, Category 2, Declassify Upon Notification by the Originator."

(C CCO)



The following article represents the personal and professional opinions of the author and should not be interpreted as an official statement on the part of the Panel.

J.T.W.

his is a short paper ambitiously aimed at resolving a controversial question: To what end does the Special Research Analyst (SRA) serve in the U.S. SIGINT system? There are more SRA people in the U.S. SIGINT organization than in any other single SIGINT career field, and the question of what constitutes the substance of their work is surrounded by a sometimes vigorous debate. An official definition exists, but does not seem to have taken hold. It somehow appears easier to define what a linguist does or should be expected to do -- or to describe the duties of a traffic analyst, cryptanalyst, telecommunicator, engineer, etc. -- and get a general agreement. Still, whither the SRA?

Being the military member of the SR and IS (Information Science) Panel and working at an SR assignment in A7 (Office of Operational and Strategic Studies) has motivated me to try to come to grips with what it is that SRAs are bent towards. The idea is to get at the function by trying to get at the results: what is the SRA supposed to produce? Regrettably, convictions of those who are certain they know what an SRA is differ from others who are like-minded. This is distressing in its administrative ramifications. What follows is a contribution, rather than a fixed proposal -- one which could further confuse the issue. In part it is aimed at the person who aspires to be an SRA, or who believes he or she already is one.

The SRA produces intelligence by analysis and by one or more forms of reporting, of which the end product is but one. As in the case of

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a person suspected of a crime, the SRA m shown to have motive, means, and opportunity and reporting is the means and opportunity.	unity.	
	I hope that these brief reflection. This is my own view, which sarily represent the position of in the Agency, and I would not was such. I am merely trying to the nature of the SRA's work by motives with SRA means, opportunucts (reconstructions).	and does not neces- any authority ant it construed get a handle on linking SRA mities, and prod-

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make this proposal and not at all in jest. I feel it would rectify a glaring inefficiency in the System as we now know it, and serve to raise Intelligence to heights never before imagined.

Throughout the Agency one notes a multiplicity and marvelous diversity of logs. Logs are to be found for every purpose and occasion. There are logs of messages, both incoming and outgoing; logs of security check; logs of lanes; logs of telephone calls; and so forth. In our quest for Order and Knowledge, logs have assumed an allimportant role as a vital tool to organize and recall the myriad of information pouring into the Agency. There is not a single section that would not flounder within hours or even minutes were its logs not kept up to date. Logs provide an excellent management tool for compiling statistics of Output, Input, Production, Numbers of Messages, Workers, Logs, Hours, etc. It may be said that the power to log is the power to destroy. The integrity of logs is of utmost importance to the System and therefore to Intelligence. We must have logs and we must have the best logs.

Currently, in the Agency, all logs are decentralized and subject neither to a common administrative body nor a quality control. This is potentially a disastrous situation. Thus far we have been lucky. Imagine, though, the havoc one perverted secretary could wreak in a branch by subtly subverting its logs. Imagine the utter chaos a minor conspiracy of such degenerates would create in no time at all. Or, alternatively, imagine a fire raging out of control, consuming a division's logs before it could be extinguished. This threat is real. There is currently more wood, dead and otherwise, in the form of paper stored in the bowels of NSA than forest fires consumed last year. The hazard is astounding. One careless cigaette, one thoughtlessly placed Thermit bomb, and all could be lost.

It is to prevent such a disaster or disasters that the following measures must be instituted.

A well-defined career field of log-keepers must be formulated and introduced into the System. This should be a very tight group of chosen individuals -- hand-picked for their dedication and unswerving reliability and honesty. These will doubtless have to be found outside the Agency. This log-keeping career field should be organized as a guild, with apprentice log-keepers, progressing through

journeymen and several degrees of master, up to guildmaster, who would hold rank equal to a Deputy DIRNSA. Special uniforms, oaths, and initiation rites would be phased in as the Guild became fully operational. The Guild would have jurisdiction over all Agency logs. No one except a Guild member would be allowed to log anything. Suitable punishments for illicit logging would be instituted to act as deterrents against tampering, sabotage, or other wanton acts against the System by non-Guild members. Coupled with the Guild would be a Standard Agency Log and Uniform System of Logging. All logs would be bound in a suitable material demanding respect, e. g. leather and gold, and be of a standard size. The Uniform System of Logging would ensure orthodoxy among all Keepers of Logs and members of the Agency. But, more than that, it would stand as a Guardian of Truth, inviolate and unyielding before the tempests of heresy. All logs could thus be kept pure.

The second phase is perhaps the most crucial. It involves the creation of THE MASTER LOG. When in full operation, THE MASTER LOG would contain all -- I repeat, all -- entries made in any approved logs in the entire Agency. Central control would thus be assured and DIRNSA would have total access to all knowledge logged in the System through the inviolate person of the Guild Master Keeper of THE MASTER LOG. It is not important whether the system is mechanical or electronic, although I must admit the reassuring effect paper and pen have on lay people. Division-level and group-level Master Logs would be kept prior to full implementation of the Agency Master Log and maintained thereafter in supportive roles to ensure quality in THE MASTER LOG.

THE MASTER LOG, as the total repository of log entries in the Agency, would naturally require increased security of the highest order. Black cloths, perhaps with gilt edging, could provide a great deal of protection from saboteurs (the magical powers of black cloths have been amply demonstrated Agency-wide in the past in the countless espionage attempts that have been foiled by them). Contingents of guards from each service in equal strength -- 8 Army, 5 Air Force, 5 Navy, 1 Marine -- would serve to physically thwart intrusion by any malefactors.

This is a concept late in coming. Its potential is universal. It could ultimately be applied nationwide, perhaps worldwide: A tool for Uniformity, Orthodoxy, and Peace.

NSA-crostic No.9

The following NSA-crostic was submitted by guest NSA-crostician David H. Williams, Pl6.

The quotation on the next page was taken from an article in an NSA publication.
The first letters of the WORDS spell out the author's name and the title of the article.

DEFINITIONS

WORDS

Α.	With Word L, one of the wives of Henry $\mbox{\sc VIII}$	24	36	169	108	158	79	96	120	102				
В.	Agreement, conformity; Honda	84	163	129	138	146								
С.	Fashionably elegant	128	107	174		164	190							
D.	Ladies' apparel	134	189	166	64	2	172							
Ε.	Moslem prayer leader	29	17	63	152									
F.	Advice to a patron in a Nairobi restaurant to try the intoxicated jungle beast (5 wds)	160		150 91					33	6	176	183	165	27
G.	Caesar's surprised comment upon hearing that his friend had also had dinner (4 wds)	104	119	155	12	49	87	113	144	132	137	16	173	94
н.	Escorts inside (2 wds)	139	117	170	187	182	147	86	90					
I.	How Mark Spitz departs (2 wds)	188		161	74	40	76	181	191					
J.	Enlighten	69	114	1	77	88								
K.	Shanty	35	186	130	46	31								
L.	See Word A (2 wds)	41	177	197		4	38		30					
M.	Device to cause a light to operate intermittently; MHMH's grandfather	106	85	89	62	15	47	103						
N.	Abrasive powder	171	156	 75	193	58								
0.	Flaccid	179	26	142	7 0									
Ρ.	Small whirlpool	9	140	199	194									
Q.	Pickles	81	28	68	127	<u></u>	71	162	118					
R.	Preempting, confiscating; usurping	178	18	157	123	78	136	175	109	115	72	60	7	101
s.	Dozes	-37	39	92	148									
т.	Small-caliber rifle or pistol (comp)	14	52	65	83	112	51	185	122	73				
υ.	Chinese hors d'oeuvre	56	8	43	44	93	10	57						

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UNCLASSIFIED

UNCLASSIFIED

V. Less wide

42 100 159 20 192 32 45 13

W. Spectral

151 67 34 55 125 168 116

X. Drawback; debt

50 22 149 11 124 167 98 95 143

Y. Unit of linear measure

141 131 110 53

Z. Season

5 196 99 184 133 153

 $\mathbf{Z}_{1}\text{.}$ Spasmodic inbreathing accompanied by a characteristic sound

154 82 97 61 195 145 121 111

	*.					 			 		_	
	2 D										12 G	
					}						26 0	27 F
İ							_			ĺ	65 T	
												93 U
			-								105 F	
											118 Q	
											132 G	
											144 G	
											157 R	
]				171 N	
]									184 Z	
	1							193 N	194 P	195 Z ₁	196 Z	197 L
198 F	199 P		200 F									D.H.W
			¥							(So	lution	·

THE THAI SEMINAR PROGRAM

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new training program in Thai language for preprofessional and postprofessional NSA linguists may provide a useful model for similar

training in other languages. Although it has been in existence only since September 1976, three courses have already been conducted, and planning is underway to set up an Indonesian program along the same lines. In addition, one Thai seminar participant whose current assignment involves French (and who is under pressure to attain certification in French) declared, "This is exactly the type of course we need in French!" So there may be a French version soon, as well.

The purpose of the Thai program is to provide opportunities for preprofessional and postprofessional Thai linguists to participate once each year in a continuing education program, to grow in the language, to increase their knowledge of Thai cultural background, to discuss language problems which may be bothering them, and to receive periodic professional stimulation through immersion in the Thai language.

The program is designed to offer intermediate and advance training as a follow-up to the Thai Basic Course. Currently eight seminar-type courses -- two intermediate and six advanced -- are available. However, one advanced seminar on current affairs may be taken repeatedly, since the study material is always different.

Seminar sessions are held once a week for 12 weeks at a remote facility with a native instructor. Each session lasts 4 hours, during which all discussion is in Thai language.

Required reading assignments on Thai cultural subjects (sometimes supplemented by additional reading materials) are given one week in advance. Each student is assigned responsibility for making an oral report to seminar participants on a portion of the required reading. Everyone may discuss the oral reports, describe language problems they have encountered, and ask questions or contribute experiences related to the subject.

Instructors are native Thai speakers. Their job is to:

- offer criticism or correction when students misspeak;
- answer student questions regarding either subject matter or language;
- moderate the seminar; and
- stimulate discussion if conversation lags.

Because the amount of discussion generated by different topics varies considerably, other teaching techniques are used to supplement discussion, such as having students read aloud or transcribe from dictation.

J.P.R.S. LANGUAGE REFERENCE AIDS OFFERED TO N.S.A. LINGUISTS

sti read	Chairman a multi ted that some of the aids are now out cost, through normal, time-consuming informally, and gratis, ll available. Mr. Spiegelthal would like to consoliders this opportunity to obtain copies	h Servic page lis of prin channels as many	e (JP t of t; ot . Bu copie	RS), turned over to his host, SIGTRAN JPRS-produced aids for the translator. He hers are still in print and may be obtained, t kindly offered to send s as he requests of those aids that are ests for the aids, and offers CRYPTOLOG out this page and sending it by
30 3	September 1977, to:	R51		P.L. 86-36
		Number of copies	105	Apollo-Soyuz Test Project Glossary (Russian-English,
	Title	desired	1	English-Russian), ASTP 20020.1, 3 Feb 75, 364 pp.
01	WORLDWIDE Handbook for Contractors,		106	Concise Handbook on Space Biology and Medicine, Parts I & II, JPRS 61236-1 & 2, Feb 74, 501 pp.
02	Nov 75, 51 pp. Directory of JPRS Serial Publi-	 	107	Drug Products, JPRS 64908,
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103	Recommended Radio Terms, JPRS			Press, JPRS 62348, June 74, 72 pp. PEOPLE'S REPUBLIC OF CHINA
104	55957, May 72, 17 pp. Glossary of Russian Abbreviations and Acronyms, Library of Congress/ATD, 1967, 806 pp.		300	Chinese-English Dictionary of Modern Communist Chinese Use, JPRS 20904, Feb 65, 845 pp.

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301	Standard Translation of Chinese	Ì	412	Glossary of Terms Used in the	i
302	Terms, JPRS 57420, Nov 72, 119 pp.		_ `	North Vietnamese Press,	}
302	of civilede communication	1		unnumbered, Sep 71, 93 pp.	1
	Terms and Phrases, unnumbered, Oct 69, 113 pp.		413	VC/NVA Terminology Glossary,	+
303	Standard Chinese Telecode Book,		-	Vol I (A-M) & Vol II (N-Z), 3d	
0.0	unnumbered, Dec 66, 101 pp.		}	Edition, US MACV, Jul 71, 610 pp.	1
304	Chinese-English Concordance to	+	-		+
	"Quotations from Chairman Mao Tse-	}	1	NEAR EAST AND AFRICA	
	tung," unnumbered, Jun 71, 167 pp.	1	500	Abbreviations in the African	1
305	Simplified Handbook on Adminis-		∤	Press, JPRS 54371, Nov 71, 121 pp.	1
	trative Division of the People's	ł	501	Guide to Translation of Middle	
	Republic of China 1972, JPRS		1	East Press Material, unnumbered,	
	L/4379, Jan 73, 152 pp. (GUO	ĺ	l	_Nov 74, 24 pp.	1
	control removed 24 Apr 74)		502	Guide to the Transliteration	1
		 	٠	of Algerian Place Names,	
	ASIA	-	l	JPRS 58041, Jan 73, 63 pp.	
400	Glossary of Terms Used in the	İ	503	Alphabetical Listing of Cypriot	1
	Overseas Chinese Press of	1		Towns and Villages Translitera-	l
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401	Glossary of Shipping Terms Used	 	1	_73, 63 pp.	
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	and Lao Press, JPRS 62295,	1	505	Principal Journalists and Trade	
	Jun 74, 50 pp.	1		Union Leaders in Egypt, unnum-	
403	Guide to Translation of Cambo-	+		bered, Jan 72, 26 pp.	
	dian Press Material, unnum-		506	Guide to the Transliteration of	<u></u>
	bered, Jun 74, 28 pp.	_	1	Moroccan Arabic Place Names,	
404	Glossary of Indonesian Abbrevi-			JPRS 64704, May 75, 45 pp.	
	ations and Acronyms, unnumbered,		507	Abbreviations, Acronyms and	+
	Jun 71, 18 pp.	i		Special Terms in the Turkish	{
405	Glossary of North Korean Terms,			Press, JPRS 64701, May 75, 68 pp.	1
	unnumbered, May 73, 122 pp.				
406	Standard Translation of North		WE	STERN EUROPE AND LATIN AMERICA	1
	Korean Communist Terms, JPRS	1 .	600		1
	26237, Sep 64, 95 pp.		}	Acronyms and Terms Used in	
407			l	the Western European Press,	1
	Terms, unnumbered, Apr 74, 255 pp.	L	l	JPRS 58963, May 73, 62 pp.	
408	Guide to Translation of Lao		601	Abbreviations in the Latin	
	Press Material, unnumbered,		l	American Press, JPRS 64152,	1
	Mar 71, 16 pp.		l	Feb 75, 192 pp.	}
409	3 7		602	Spanish-English Scientific	
	lish Abbreviations Appearing			Glossary, unnumbered, Jan	
	in the Press of Malaysia and	1 /	l	72, 332 pp.	
	Singapore, JPRS 56582, Jul 72, 49 pp.		603	Illustrated List of Common and	
	Abbreviations in the Mongolian		ĺ	Scientific Names of Fishes	
	Press, JPRS 57176, Oct 72, 47 pp.		l	from the Gulf of Mexico in	}
411	Vietnamese-English Dictionary,			Latin, Spanish, Russian and	
	Vol I (A-L) & Vol II (M-Y), JPRS		l	English, JPRS 46741, Oct 68,	}
	37700, Sep <u>66</u> , <u>1476</u> pp.			46 pp.	}
					
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one copy each unless otherwise specified.

I realize that some of these publications may be out of print and unobtainable now.

(Name, printed)
(Organization and room number)

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WHOM?

Communications Analysis Association:

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Treasurer: Secretary:

Jane Dunn, 8025s

Board members:

Capt.J.Williamson, USN, 3981s

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Wayne Stoffel, 3369s

"Whon?" Or, rather, "Who?" Who belongs to the CAA, anyway? What kind of people are they? Where do they work, and what do they do? And why do they want to be members of the CAA?

A quick look at the membership list

leaves a person with two distinct impres-

First, the CAA population is really dispersed throughout the Agency. There are no real pockets or strongholds of members to speak of.

Second, a significant number of the members may well view their association with CAA as a way to keep up with "what's going on" around the Agency.

With this in mind, your fearless CAA Board has launched out in yet another effort to meet the needs of our members: a series of opera-

tional briefings, in what we hope will be an informal atmosphere. These briefings are designed to let CAA members "get current" on whether we're gaining on the target or the target is gaining on us.

This is all very experimental. Dennis Chadwick, a TA intern (x4202s), agreed to steer this effort for CAA. The first of this series, held recently,

If you have an idea for a briefing in this series, see Dennis. If you would like to talk to kindred souls (not kindled soles, Harvey!) about your problem (target, that is), see Dennis. If you want to know where and when the next briefing is, join the CAA (members are notified of times and places). Or find a CAA member who will let you read his mail!

UPCOMING EVENTS

September

The presentation by scheduled for this month has had to be canceled.

that was

(U)

A picnic? It's still a gleam in our President's eye at this writing, but the CAA could be having its First Annual Picnic this month.

October

A nominating committee will be appointed to seek out the best slate of candidates for the forthcoming CAA elections at year's end. (No, let's not call it Project DIOGENES.) If you want to be involved in this process, either as picker or as pickee, let one of the board members know. (טוֹ

LOGO WANIED!

"logo: n., a clipped form of logotype." "logotype: n., a distinctive company signature, trademark, colophon, newspaper nameplate, etc."

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The CAA is looking for a logo. We might even start up a contest to find one. Watch for details, or check with a board member.

SIGNS BY W.S.

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

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Letten to the Editon

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To the Editor, CRYPTOLOG:

the Agency).

But before I get into the various issues raised by I will do something I should have done in the beginning, that is, establish some credentials for addressing the problem. I started as a desk linguist at NSA in 1963 and stayed in that job as a translator-transcriberanalyst-reporter, section chief, integrated analyst at three field sites, branch chief, and Group language coordinator until 1977. I was certified by the Language Panel in 1969 and by the Special Research Panel in 1972. I was a member of the PQE Committee from to January 1977 and chaired that committee PQE Committee from 1970 twice. I was a member of the DDO Language Advisory Committee from July 1975 until February 1977 and I am currently the intern sponsor Language Interns. "Ignorance concerning the work that the desk linguist does for the Agency"??? Then again, I Ignorance indeed, may have overestimated my infamy.

At any rate, let me get to the real issue. No intelligent person would argue against the idea that "turning foreign sounds or words into English" is a difficult task requiring a great deal of knowledge that is "peripheral" to the skill itself. It is a well-founded rule that you must have some degree of subject-matter knowledge to get those foreign sounds and words into understandable English; you need target knowledge and a raft of other skills -- cryptanalysis, TA, etc, in some cases. And very often for the highly qualified desk linguist, language skill is so intertwined with those other skills that it becomes indistinguishable and we have the guy or gal that I believe to be one of the most valuable resources this Agency will ever see, the "complete SIGINTer."

The "truth" I was trying to get at in my letter was that, even after certification, few people would develop so well as to get much beyond 13, a grade level that starts at close to \$25,000 per year. And, hopefully for the last time, let me try to destroy the myth that it is any

different in other cryptologic skills: I know few people in the TA, CA, or SR field working on a particular problem who are paid at a rate higher than GG 13. As in the language field, there are precious few billets beyond 13 and the competition for those promotions is fierce -- as I believe it should be.

A few facts:

- Average pay for transcribers, who must be excellent in their language and possess the peripheral skills GG 11-12.
- Average pay for civilian technicians hired by U.S. companies working abroad -- and, again, they must be near-fluent -- \$17,000-20,000 per year, except in the desert oil fields, where it is higher. EO 1.4.(c)
- Average pay for simultaneous interpretors at the United Nations (and their language skill would put most of us to shame) -- \$19,000-20,000 per year.

There are two points I want to make here: first, the average pay scales are remarkably similar to our own, and, secondly, everybody expects the good linguist to have the peripheral skills when they are getting that much money.

New subject: Neither I, nor anyone I know, wants to replace you, or any other good linguist, with "high school graduates at grade level 2." The introduction of the GG-2s

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is driven by three

things:

• Average grade structure, which is too high and must be lowered. This is not a problem we dreamed up. It is real and it must be solved. One way to help that is to fill in the bottom of the grade structure.

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

In the meantime, please forgive me for quite unintentionally offending you. My background should help to convince you that I could not ever put linguists down without including myself.

Dan Buckley, MO3

(C - CCO)

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The national spirit that created the Potemkin village and Gogol's "Inspector General" apparently lives on in the Soviet Army. Writing in a recent issue of the official organ of the USSR Ministry of Defense, a Soviet Army officer* deplores two methods that are used to achieve snappy precision in tactical exercises involving armored personnel carriers. Describing one of these methods, he writes:

Recently it has become the practice at our exercises, especially tactical exercises, to have none of the issued commands executed until the exercise leader or the subdivision commander has given the code number "222." For example, the company is located in the concentration area. The command is given, "Mount your vehicles!" But everyone continues to carry out his previous duties until he hears the slowly pronounced words, "T-w-o h-u-n-d-r-e-d t-w-e-n-t-y

*Senior Lieutenant S. Latush, "Tactics or Parade Precision?", *Voennyj Vestnik* (Military Herald), February 1977, pp. 57-58. t-w-o!", after which they dash to the combat vehicles. That is how all the subsequent commands are executed: "Take your positions -- 222!", "Start your motors -- 222!", "Form a line of platoon columns -- 222!", and even "Fire a burst from the front -- 222!"

The question arises, "What advantage is to be gained from this innovation?" Probably just one thing: we strive for precision, the simultaneous beginning of command execution, and, especially, beauty. But, on the other hand, we lose an awful lot, particularly time. Because this is modern combat! Under real-life conditions, a single command will be issued. Consequently, it is necessary to strive for rapid reaction to precisely that command, rather than to those ridiculous 222's.

The Soviet author says that these "ridiculous 222's" will not be used in reallife combat situations. But who can predict that, in some future engagement, real Soviet troops will not hear some other code number used to tell them "Charge! -- Simonoff says!"

(U)

NEW UNSYNDICATED COMIC STRIP WILL APPEAR FROM TIME TO TIME IN "CRYPTOLOG"

Al Balloni, Editor

By A.J.S.



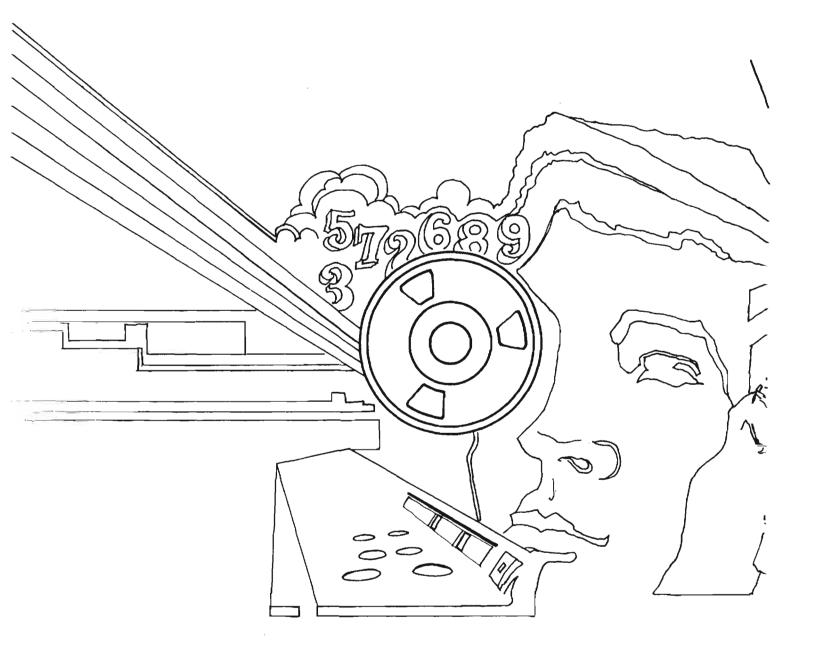
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