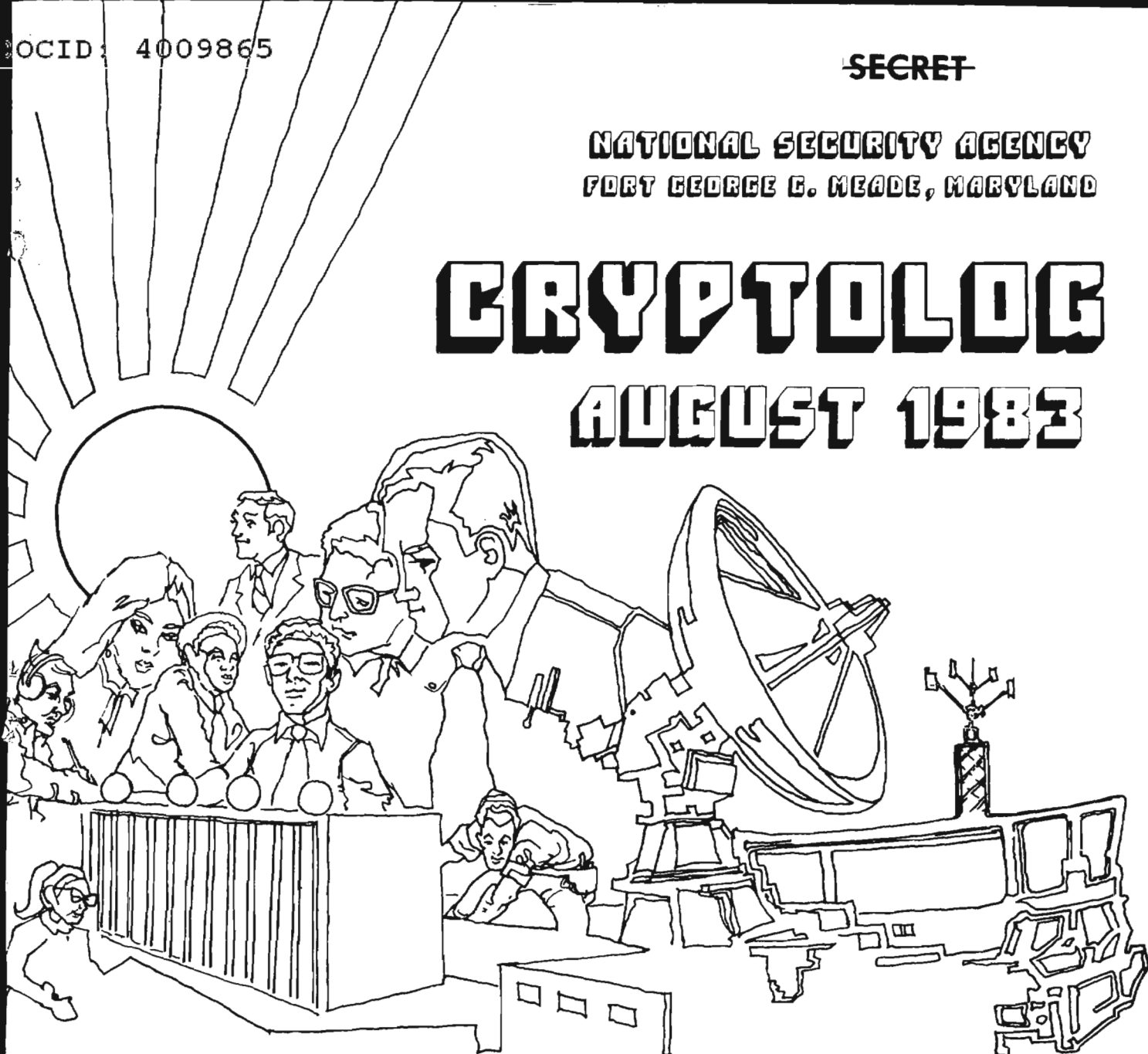


NATIONAL SECURITY AGENCY  
FORT GEORGE G. MEADE, MARYLAND

# CRYPTOLOG

## AUGUST 1983



P.L. 86-36

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We are always looking for articles, letters, and technical material that might be suitable for publishing in Cryptolog. We think of the magazine as a technical bulletin board so that people at one end of the building can keep up with what is going on at the other end of the building.

There are some restrictions on material we can use. First, we must know who the author is. We will consider publishing material anonymously, but either the editor or the assistant editor must know who the author is. We stress this because we have received some material without the author's name, but it will not be published (no matter how interesting) unless the author(s) contact one of us. Sorry about that.

Another restriction involves reviews and comments about current books that discuss the Agency. We have received such items from time to time but have had to reject them, usually for legal reasons.

Aside from the legal aspects, there are practical reasons for avoiding the subject. Let's say that Constant Blabber puts a bunch of ridiculous stuff about NSA into his latest book. We review it and point out the errors. Then he brings action to get copies of everything we have that mentions him or his dumb book. If we happen to have your manuscript in hand, and it mentions ole Constant, then your item is fair game for him, too.

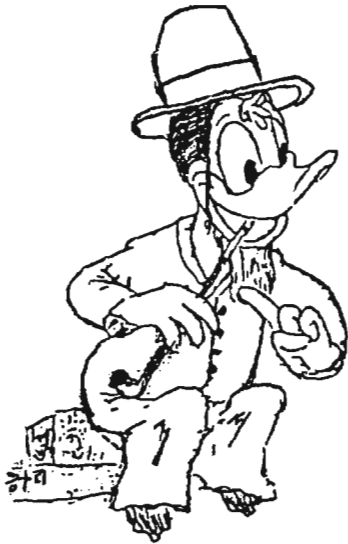
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*WES*



# THE CASE OF THE 'FOWLED-UP' CRITIC

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by



Q42

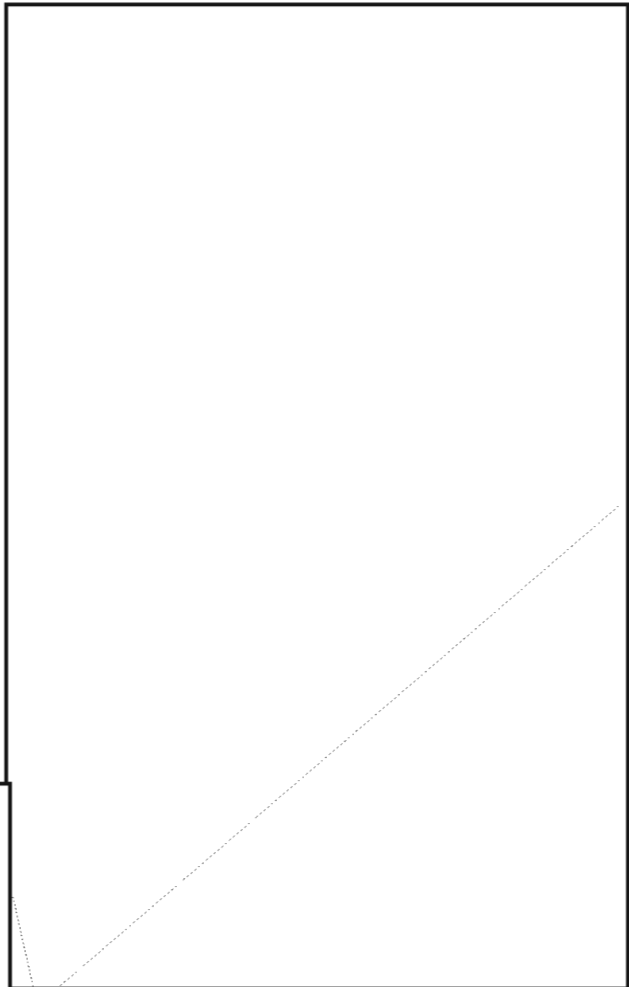


he old adage "Things are seldom what they seem" is nowhere more true than in the fascinating world of SIGINT. This is particularly applicable to

(U) military SIGINT targets, to which this article is restricted.

(U) For some time now, I have thought about describing in anecdotes ways in which natural phenomena can conspire to complicate the lives of SIGINT analysts and reporters--and of the users whom they support. The main intention here is not only to amuse but also to show that the answers to seemingly complicated SIGINT questions often lie in the strangest, yet most "natural" places. In fact, sometimes the answers are so simple as to be labeled "ridiculous" by many, but they are nevertheless true. A second intention is to demonstrate the value of judicious use of collateral sources in explaining events which, based on SIGINT alone, may present an entirely different view.

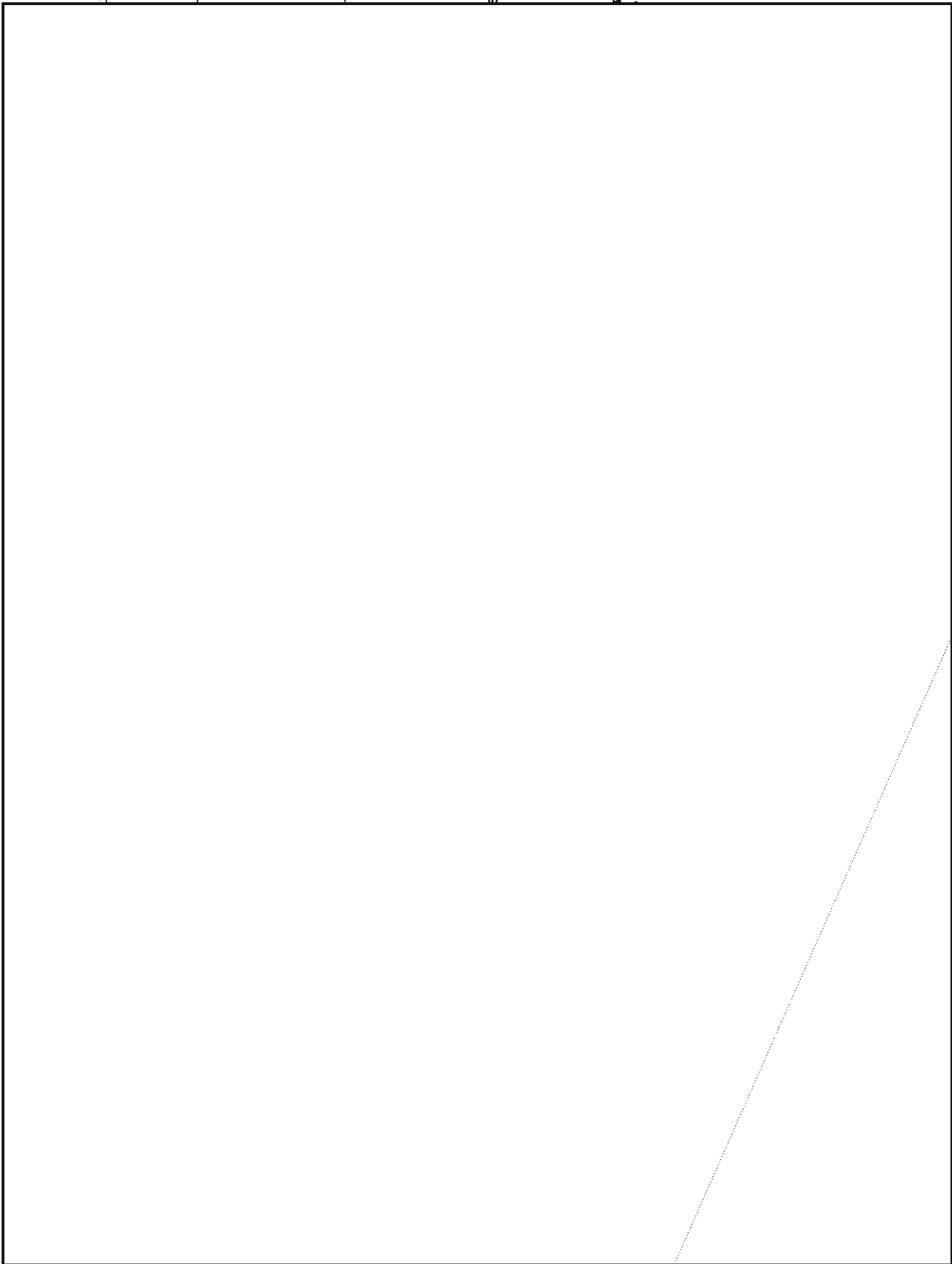
(U) Although I have selected humorous titles for the two episodes in this short series, the SIGINT facts are presented exactly as they occurred, as are the collateral additions. Intrigued? I hope so! Read on!

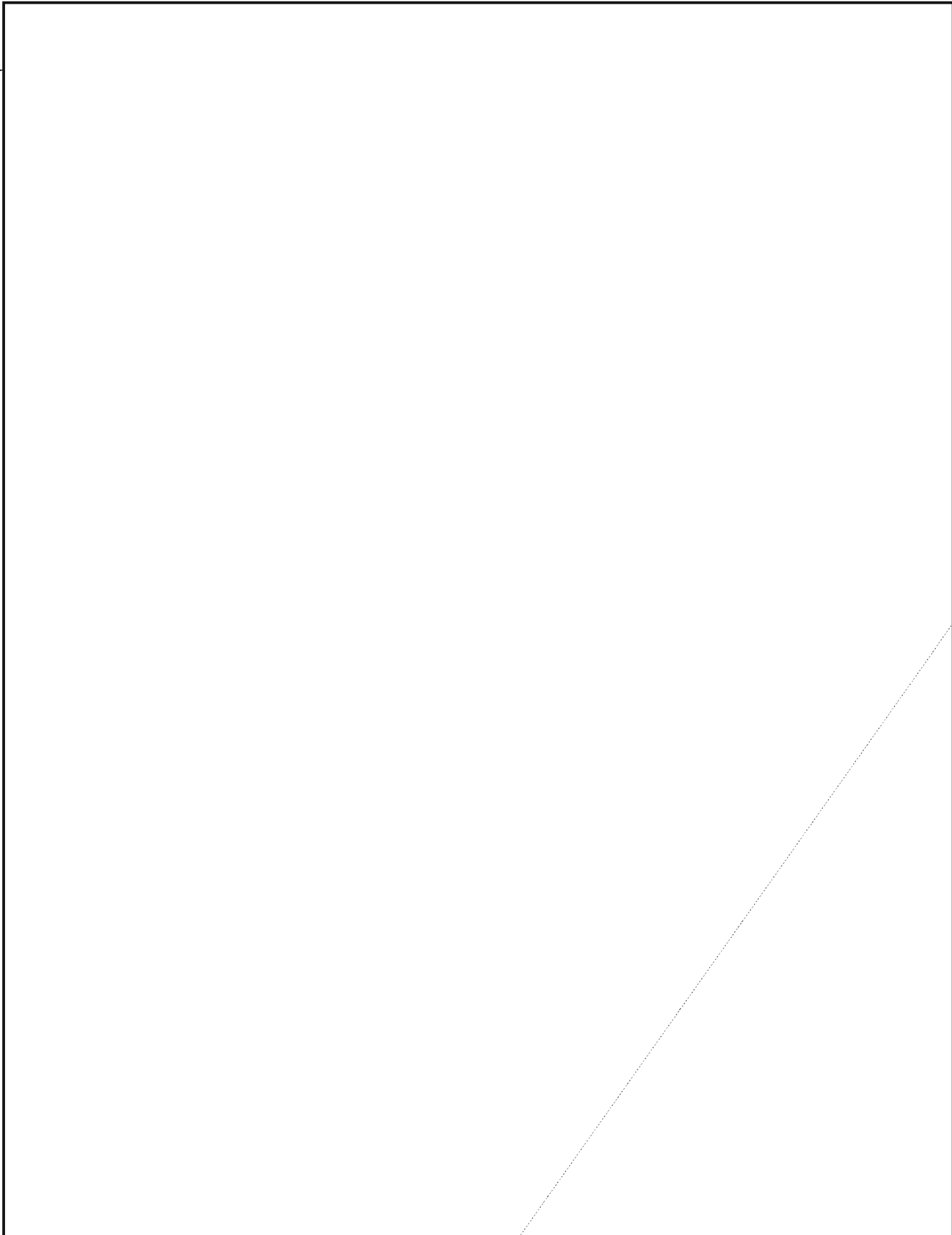


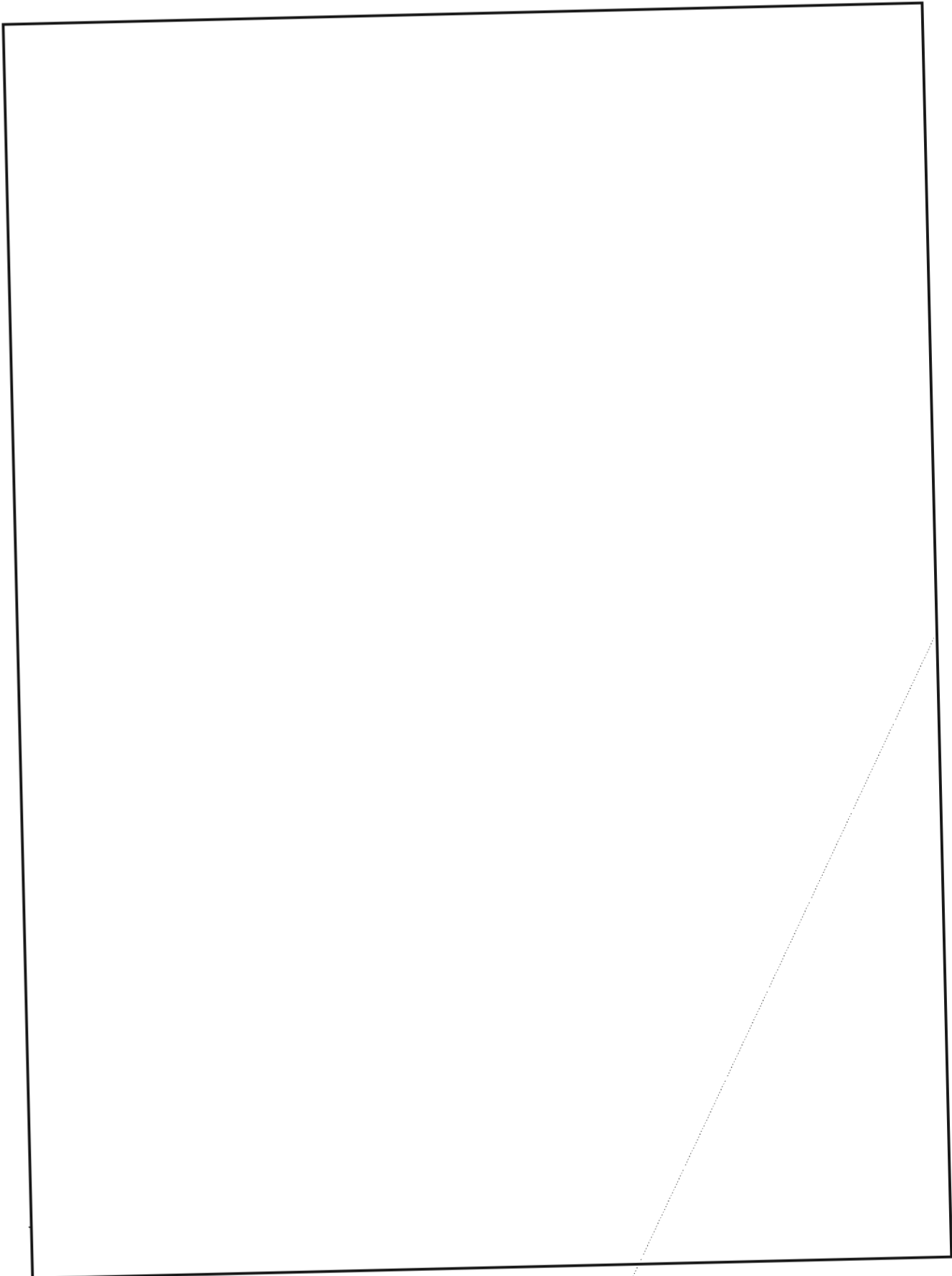
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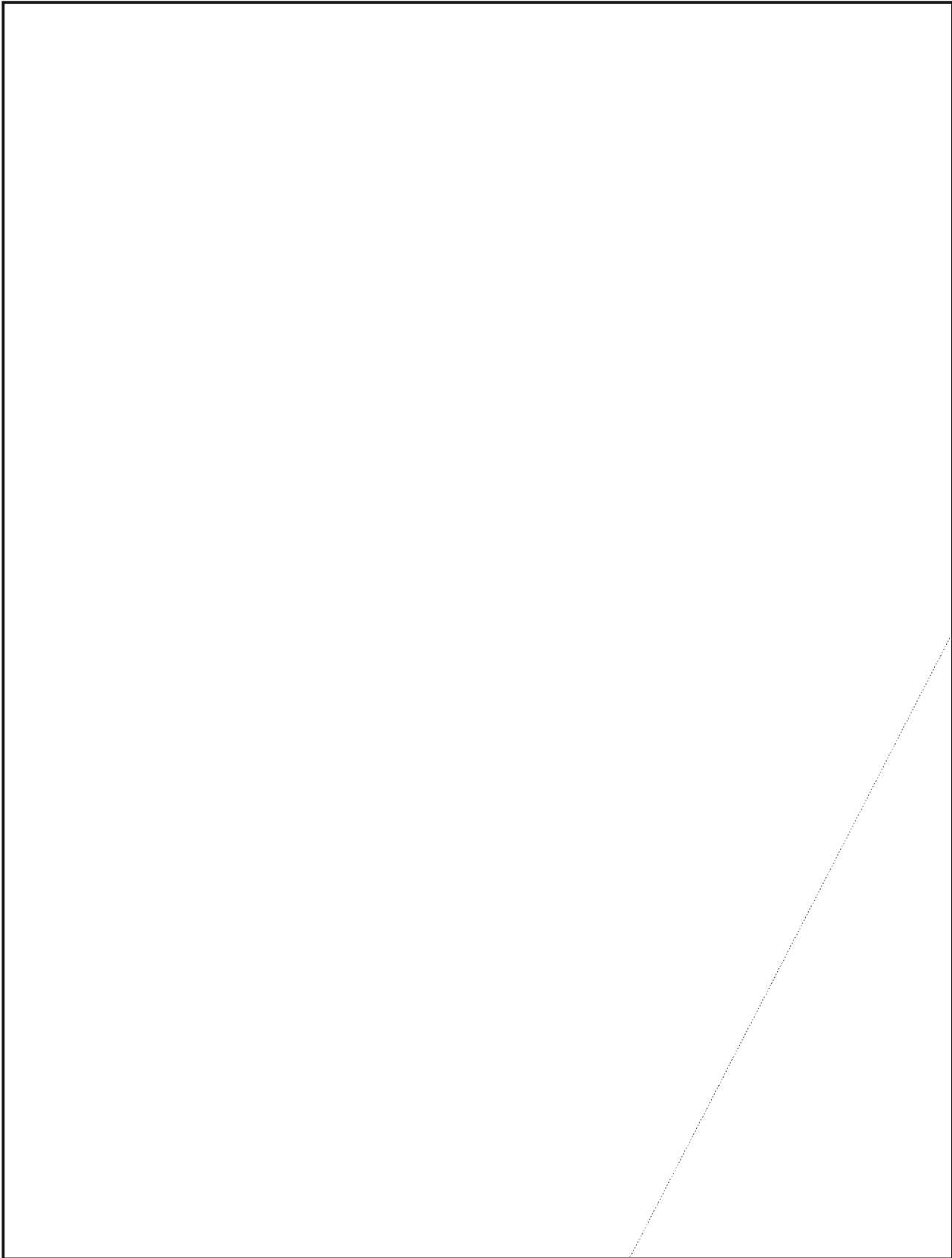
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# DOES YOUR OFFICE MAKE YOU SICK? (U)

by



P.L. 86-36



That's the title of a popular article in a recent issue of American Health magazine (Vol. II, number I, Jan/Feb 1983, p. 79), by Sheila S. Moramarco. It describes an embarrassing series of incidents in the Environmental Protection Agency's new building: employees in a variety of work areas came down with mysterious illnesses involving profuse sweating, lethargy, excessive menstrual flow, and skin mottling, among other bizarre symptoms. The problems could not be traced to any single type of source in the different offices. The EPA is housed in a "three-story glass and concrete building with 12-floor high-rises on each end. Sealed against the weather with windows that don't open, with air-conditioning, heating and lighting that are centrally controlled, this office is a typical 'tight building' ... Ironically, the E.P.A. had given its employees a work environment--an office building improvised from a shopping mall--distinguished by stale, polluted air and a haphazard ventilation system incapable of ridding the building of toxic chemicals. But what happened at E.P.A. was not an isolated incident. The pattern of the erratic, mysterious illness ... is common enough in such offices to merit a medical name: 'tight-building syndrome.'"

This syndrome is likely to affect individual workers in widely scattered offices that have nothing obvious in common, while sparing other workers sitting at neighboring desks. Its symptoms are a grab-bag typically including skin rash, respiratory distress, eye irritation, lethargy, nausea, dizziness, and menstrual irregularities. The article quotes the

following summary by Judith Gregory, research director of the Working Women Education Fund in Cleveland: the ailments "are generally the result of a combination of factors ... They may include irritating or toxic indoor pollutants; biological agents such as fungi, spores, or bacteria; inadequate fresh air--and high levels of job stress." What it seems to amount to is that the air-tight environment concentrates any irritants that happen to exist in a given work area and raises the probability that individual employees who are at risk for any reason--stress, physiological weaknesses or predisposition, etc.--will be affected. A somewhat similar situation has been coming to light in homes tightly insulated to save energy over the last few years.

What are some of the commonest chemical problems in offices that may be exacerbated in "tight" workplaces? The most widespread pollutant, according to the article, is formaldehyde. This substance is a common ingredient in building materials and office supplies and it has a strong tendency to leak into the air; thus it is an inescapable constituent of stale office air. It can cause eye, nose, and throat irritation, breathing difficulty, dizziness, nausea, fatigue, and confusion. A level of six parts per million, three times the level allowed by OSHA, was found in one office building in a study triggered by employee complaints. Many people are affected by formaldehyde even at or well below the level permitted by OSHA standards. Worse still, formaldehyde is known to cause cancer in animals, though we aren't yet certain that it does so in humans.

Ozone is another common problem in office air. It is "an unstable form of oxygen produced when air is exposed to high voltage or ultraviolet light." Ozone can cause severe irritation to the lungs, nose, and throat, permanently damage the respiratory system, damage blood cells, and impair vital enzymes. "High-energy office machines, photocopiers in particular, can build up dangerous levels of ozone" in inadequate ventilation.

Asbestos is another culprit, due to its widespread use in insulating and fireproofing materials before 1970. In many buildings where insulation is deteriorating, the air is laden with asbestos dust. EPA considers that any degree of contamination by asbestos is dangerous, however small. It can cause cancer of lungs, stomach, colon, and rectum, as well as a chronic lung disease called asbestosis.

Radon is a radioactive gas which has been estimated to cause 10% of US lung cancer cases. It is inhaled with dust particles in the air. It comes from tiny amounts of radium normally contained in brick, rock, and concrete. In well-ventilated spaces it does not present a hazard, since it can escape without building up. But when ventilation drops by half, the radon level doubles.

Job stress may make individuals more vulnerable to these pollutants, concentrated by the "tight-building" environment and poor ventilation. Workers who have some feeling of control, enjoyment, and reward in their jobs and a hope of stability for the future are defended to some extent from the environmental stressors. This may go far toward explaining the higher incidence of "tight-building syndrome" in clerical and secretarial workers and, specifically, among women.

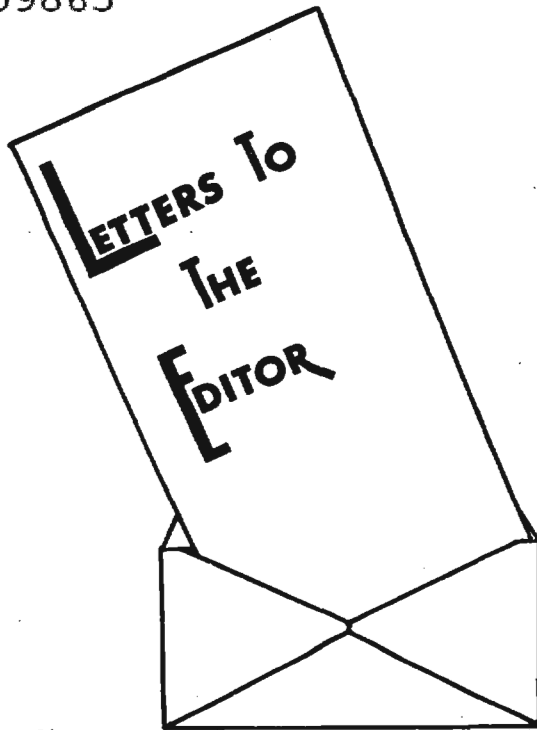
Office copiers are among the major causes of health problems for office workers. Studies have shown, according to this article, that "both the materials and the process used in photocopying can cause serious health problems." A worker who fails to close the cover during exposure gets a dose of strong light that could produce eye and skin problems. The paper used in making copies can cause allergic dermatitis. Chemicals in photocopier toners (nitropyrene, trinitrofluorenone, and hydrocarbons) may be bad for skin and eyes, though there is no definite proof of damage as yet. Copiers in small rooms with poor ventilation

can build up ozone levels well above the .1 part per million considered safe by OSHA.

Is this a description of your work area: "stuffy, dirty air; no air moving near the air vents; dust and fibers accumulating visibly on tops of cabinets and desks; windows that can't be opened; ventilation or air conditioning we can't adjust or control"? If so, it is imperative that you look into the situation and get something done about improving the ventilation. Is there a copier or some other machine or activity that may cause noxious fumes in the same space with you? That's another sure sign that you should make certain your office is well ventilated, or get yourself moved as far away from the pollution source as you can (preferably into another room). And, while the American Health article did not mention smoking, many authorities now seem to agree that tobacco smoke (whether actively ingested or passively suffered because of others' habits) is a serious health hazard.

Judging by what I have seen, all too many of us must work in poorly ventilated areas. We have rearranged walls and doors, restructured office spaces, and moved furniture around so often and so randomly that no system of ventilation could cope with the present situation in our buildings. Too many of us have deliberately sealed off air vents to stop "drafts" or inadvertently obstructed air movement with stacks of furniture, boxes, etc. Maybe it's time we looked around and began to take seriously warnings like those in this article.





Dear Editor:

I feel constrained to point out a few errors I noted in [redacted] article "Government of the People, by the Party, for the Leadership" in the April 1983 issue of Cryptolog.

Firstly, the Party Congresses are held, appropriately, in the DVORETs S"EZDOV (The Palace of Congresses), not a DOM SOVETOV. Perhaps Bill is thinking of the DOM SOVETSKOJ ARMIJ or the DOM SOYUZOV.

Secondly, the correct title of the Soviet chief of state is "Chairman of the Presidium of the Supreme Soviet"; the term "PREZIDENT" is mainly reserved for foreign use.

Thirdly, the post to which Andropov was quickly elected was, of course, that of General Secretary of the Central Committee of the Communist Party of the Soviet Union, not the post mentioned above. Andropov did not assume the post of Chairman of the Presidium until June of 1983.

I'm not sure what Bill had in mind when he says that Brezhnev served as First (sic) Secretary since 1970. He took over as party chief in 1964 when the post was known as First Secretary, but the title was changed to that of General Secretary by the 23rd Party Congress (1966).

In discussing the Main Political Directorate, he mentions that its chief, Epishev, is directly accountable to the Politburo. He might have added that, according to several open-source publications, the Main Political Directorate functions as a Central Committee Department, thereby giving the missing link in the flow chart of Soviet decision-making.

This is all not to disparage a most useful recitation of the differences between the formal structure and public ritual on the one hand, and the reality of power relationships on the other. Bill McGranahan and Marc Brenner are to be commended on pointing out to Cryptolog's readers that all is not as it seems in the USSR. Then again, aren't we reminded enough of that in our daily work?

[redacted]

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[redacted]

replies:

The first objection is the worst one because the man is right: I was wrong on the name of the darn building. I still have ticket stubs telling me that I saw "The Fountain of Bakchisaraj" at the DVORETS S"EZDOV-- and I read through the article umpteen times looking for mistakes like that and still blew it. As my editors have told me, this happens to the worst of us.

In the second case, I understand the question but I fail to see a problem. In that part of the article I am describing how we foreigners can be a bit confused when the Soviets remind us that their government has a president too (and [redacted] himself says that "the term 'PREZIDENT' is mainly reserved for foreign use"). It is true that I did not give this formal title explicitly, although I believe that you will find it was very strongly implied in the body of the paragraph:

"These representatives and deputies ... elect the Presidium of the Supreme Soviet which handles the Supreme Soviet's business when the body is not in session. The chairman of the Presidium is very similar to the European, idea of a president; he has very little power but he is the official representative of the Supreme Soviet and the Chief of State."

I'm afraid I don't understand the third objection at all, because I never said that Andropov became "PREZIDENT." In fact, things were happening so swiftly that I purposely avoided referring to Andropov by any specific title, since the occupant could change again by the time the article went to press and once again I would be struck with dated material. I referred simply to Andropov's "accession to power" and left it at that. Hopefully, as the situation crystallized, a more permanent line-up of personalities and positions would take shape and the readers would be able to use our description of the Party and the government to visualize a little more clearly who is in charge and how he gets things done.

In conclusion, I would like to stress that since the article was intended as a primer of the Communist Party of the Soviet Union and that country's government, I could not be complete in extent--or in time! Granted there will be differences of opinion as to what crucial and what is peripheral; but if any of my attempts to make these systems more understandable have actually caused distortion or confusion, I am most grateful to [redacted] for having pointed them out.

From: hgr at BAR1C05  
 Subject: letter to the editor  
 To: cryptolg

Dear Editor of Cryptolog:

I have a question about Zebulon Zilch's article, "My Staff--It Comforts Me." Does that illustration at the end, the one showing a shepherd separating the sheep from the goats, represent the Z Staff performing a similar function? Or does the shepherd represent DIRNSA using a "staff" to divide the bah-sayers from the nah-sayers?

[redacted] P16

Editor's Note: We submitted your question to Zebulon Zilch, who wrote the article, and his reply was "Yes!"

Dear Editor:

Thanks for your "Our of My Depth" feature in the May Cryptolog. While it was entertaining, it was far from realistic. With only 3 garbles among the 673 digits, it has a "cleanliness rate" exceeding 99.5%! Where's the challenge?

[redacted] P.L. 86-36

SOLUTION TO NSA-CROSTIC 48

From "AMERICAN MAGIC," by Ronald Lewin

"The Voynich Manuscript is worth a mention because it provides a perfect paradigm, a deeply instructive example of everything unacceptable for the wartime crypt-analyst."

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\*\*\* NOTICE \*\*\*

The CRYPTOLOG Special Issue (CISI Essay Contest), dated January-February 1983, has been favorably received and as a result a number of requests have come in for copies. An appeal is herewith made to the recipients who have finished with their copy to return it to P14 (Attn: [redacted]) for further distribution. Thank you.

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\*CORRECTION\*CORRECTION\*CORRECTION\*CORRECTION\*

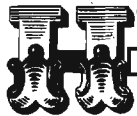
SCI MEANS  
 "SENSITIVE COMPARTMENTED INFORMATION"

(U) Somehow an error crept into [redacted] article "Do You Know the Differences?" in the June-July 1983 Cryptolog. The term SCI is expanded on page 7 as "Special Compartmented Intelligence," which is incorrect. The abbreviation really stands for "Sensitive Compartmented Intelligence," as in the chart on page 8. We hope that no undue confusion was caused by this discrepancy.



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There's one individual who was glad to see the editorial comment following [redacted] letter in the May 1983 Cryptolog because, as one who knew and worked closely with Miss Mabel Babel, yours truly definitely feels that she really deserves some recognition. If the new NSA/CSS building is called "The Tower of Babel," this writer thinks that that might be a worthy tribute to a loyal, dedicated government employee. Accordingly, I do hope that you won't mind my taking a few moments to reminisce about our "Miss Babel." No one ever called her "Mabel"--and woe unto the poor benighted soul who pronounced her family name as "babble"! She remains one of my most unforgettable characters at NSA, a place where characters (both forgettable and unforgettable) abound. It is devoutly hoped that some of the other oldtimers who remember that marvelous woman will be inspired to put some of their memories in writing too.

One particularly memorable thing about Mabel Babel was that she never used the pronouns "I" or "my" in speech or writing. Of course, she didn't often talk about herself, but on those rare occasions when someone else would steer the conversation around to her, she would speak as if she were talking about someone else. Like Julius Caesar before her or Ellery Queen and Miss Manners since, she referred to herself only in the third person: "Well, in Miss Babel's humble opinion ..." (although her opinions were anything but humble) or "Things would be done differently if Miss Babel were in charge."

Having been brought up in a diplomatic environment, she usually referred to her interlocutors (a good word I learned from her) as "Your Excellency," not just plain "you." It certainly made a junior linguist feel

important to be so addressed by such an august personage, even though the sentence was something like "Miss Babel seems to have found a minor discrepancy in your excellency's translation" or "May Miss Babel humbly suggest that your excellency henceforth refrain from rendering this word in that fashion?"

She was probably the only person I ever met who could use the words "eschew" and "vouchsafe" in ordinary conversation, and she was the first person I ever heard use "counterproductive" in mixed company. Another of her rules seemed to be "Never use the indicative mood if you can possibly use the subjunctive." One of the other people in the section put his finger on Miss Babel's propensities when he admiringly said "She talks the way other people write."

Mabel Babel was a short woman who used a chair with several cushions on it and some of us semi-jokingly referred to it as her "throne," since it was from that seat that so many of her "imperial" decrees emanated. That was where she would sit when reading or checking people's work. But she had another desk on the other side of the room that she used for typing. She always kept at least one pencil poked into her hair (which remained black despite the passage of the years) for her corrections and notations, inscribed in her inimitable, fine, legible Spencerian handwriting with its precise angling and an abundance or plethora of loops and curlicues, but she used the Spencerian only when checking other people's work. Whenever she drafted a document, she would type it on a beat-up old Remington manual that no one else in the office dared to touch. Because she was so short, she would take the section's unabridged dictionary off a nearby table and place it on a convenient chair so that she would be high



"AGGRAVATE" does not mean to make a good situation bad; it means to make a bad situation worse!

A Pronouncement from "The Throne"

enough and at the proper angle to attack the keyboard. I recall one day when I, still one of the most junior of junior linguists, was writing some document and needed to look something up in the unabridged, so I politely walked over and asked, "Excuse me, Miss Babel, but I'd like to look up a word in the dictionary." Giving me a look that would freeze Lake Superior, she firmly replied "Can't you see? Miss Babel is sitting on it!" Case closed (and she hadn't even called me "Your Excellency")!

But about half an hour later, another occasion arose when I needed to consult the Webster's, so I mustered up all the courage I could and again begged her permission to use the book. An even frostier look accompanied an even more determined repetition of "Can't you see? Miss Babel is sitting on it!" Somehow I found the nerve to reply "But, Miss Babel, I always thought that a dictionary was for developing the other end of the spine."

With a discreet "Haha," Mabel Babel slid off the dictionary and, as I approached to use it, said "Go ahead--but just one word!"

That dictionary incident was the closest that anyone could ever remember to an argument that Miss Babel lost (and even her "just one word!" left her in control of the situation). If she did make a mistake, she did not like to have it pointed out to her and she usually had a perfectly good explanation of why it wasn't really incorrect, so that the person who pointed out the supposed mistake was really the one in error.

For example, one time when I had used the expression "from whence" in a text, she dutifully tried to tell me that this was redundant, that that "whence" was not a synonym of "where" but a preposition that meant "from that place," and that therefore the two words were not interchangeable. I tried to say that I couldn't quite agree with her and in my own defense I argued that "Shakespeare, Fielding, Thackeray, and even the King James Bible committee all used 'from whence' in their writings," figuring that she couldn't argue with

an all-star lineup like that. Completely unfazed, she replied, "Well, they wouldn't have used that locution if Miss Babel had been checking their output!" She also chastised me for mentioning Shakespeare and Fielding in the same breath, since in her view no other writer came even close to the Bard of Avon. (Some of us speculated that in her youth she may have known him personally.)

Speaking of the word "whence" reminds me that she was one of only two people I ever knew who really pronounced WH- words with a "HW" sound, so that when she said "whether" it didn't sound like "weather." (The other such person was Doctor Sidney Fairbanks, whom I'm sure some readers here at the Agency also remember fondly.)

But, whether pronouncing them or writing them, she had a wonderful way with words, which to her were like old friends. She referred to this trait of her character as "a love affair with language." She could and would discuss etymologies, derivations, and usages the way some people talk about sports, the weather, or their grandchildren. In a manner of speaking, I guess you might say that since Miss Babel was a spinster, her words were her grandchildren.

For instance, I recall the first time that I came across the French word démarche in a text I was translating. One dictionary gave "procedure, step, application, overture" as possible meanings and I forget which one I picked (probably "overture") but I wasn't really happy with it. Shortly thereafter, Miss Babel pointed out to me that well-bred translators don't have to look for good translations of that word; they just leave it as démarche, ending up with "Miss Babel is surprised that your excellency didn't know that."

A few days later when I was working on a Spanish text and translated the word gestión as "negotiation," she reminded me, "Does your excellency have any recollection of Miss Babel's discussion of démarche a few afternoons ago? Well, démarche is an equally satisfactory rendition for the Spanish word gestión. Here is a brief aide mémoire on the subject for your excellency's perusal," and she handed me a 3-by-5 card--she loved to jot things down on 3-by-5 cards and hand them to transgressors to make sure they remembered her teachings; we called the cards "Babelgrams" when she wasn't within earshot--with the message:

1. Refrain from translating the French word démarche. It is a perfectly acceptable word in English.

2. Do not (repeat "not") forget that there is an acute accent over the first e in démarche.
3. The word démarche is also recommended as a rendering of the Spanish noun gestión.

Along with the Babelgram came a lovely lecture on the valuable word démarche, a noun that can mean anything from saying "Gesundheit" when someone sneezes up to (and beyond) sending several armored divisions into a neighboring country. It was the extreme variety of meanings that the word could have (a polite way of saying "vagueness") that made it appeal to government linguists. She also went into great detail to explain the differences between "making a démarche" and "taking a démarche" (but I blush to admit that I've forgotten the distinction) and railed about how many careless people write the word without the accent over the e, expressing rage and indignation over the fact that Webster's dictionary even sanctioned writing the word without an accent. I distinctly remember her indignation as she proclaimed "Why, Miss Babel would as soon commit adultery as write démarche without its accent!" Somehow I couldn't picture her doing either.

Another of her pet peeves was the misplaced "only." When one of the local breweries back in the 1950s started using returnable bottles for which the buyer left a returnable deposit, they included in their ads a little picture of a kilted Scotch gent saying "Ya only pay for the beer!" Although not a beer-drinker, Miss Babel felt constrained to write them an indignant letter pointing out that what their Caledonian was implying was that one only pays for the beer but doesn't get it, doesn't take it home, doesn't drink it, doesn't enjoy it, or do anything else with it. "What he should be saying," she concluded, "is 'Ya pay only for the beer!' or 'Ya pay for only the beer!'" Within a week after she sent the letter, we were pleased to note, the brewery stopped using the picture and the solecism, although I later heard that they also received a lot of letters from people named MacTavish, MacGregor, MacDonald, MacLeod, etc., objecting to the use of the Scotsman.

Another time, when one of the translators included a reference to a person "who only died last week," she imperiously asked, "And what did he do this week to top that?" before changing it to "died only last week." To people who tried to argue "Well, you know what I mean," she would reply "But if your excellency wrote correctly everyone would know what your excellency means and they would know it immediately!"

One time when I had put the word "only" in a place where she thought it didn't belong, I attempted to defend myself by saying that this was the way that most people spoke and where I put the word was where the average person would do so in normal conversation, adding that I didn't think anyone would misunderstand the meaning. She handed me another 3-by-5 card on which she had written the sentence

I hit him in the eye yesterday.

and challenged me to put the word "only" in all eight conceivable places. "Does your excellency really believe that all eight of those sentences mean the same thing?" she asked and walked away triumphantly before I could answer.

She expected others to have her high standards of language usage and proper behavior and was extremely annoyed when anyone used bad language in her presence or spoke evil of a co-worker in her presence. "Miss Babel would not have expected that your excellency would say such things!"

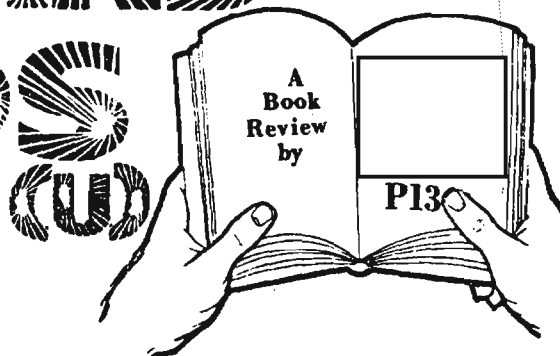
There is another story, probably apocryphal, that deals with her high standards and her feeling that she was never the one who was wrong. According to this tale, Miss Babel was on a tour of the Naval Observatory in Washington and was shown the gigantic telescopes that are used to track the movement of one particular star. Those movements, the guide said, are calculated to split-second accuracy and it is known precisely to a millionth of a second when the star would pass directly in front of one of those telescopes, which was connected to an electronic device that would observe the exact instant when the star's image landed on a hair-thin wire on a specially-rigged table that was connected to a master clock on the wall. The guide went on to explain how the clock was built in such a way that it would reset itself to the precise nanosecond when the calculations called for the star's passage, adding "and then from this room, that clock sends out radio signals to radio and television stations, railroads, airlines, military bases, and many other users all across the nation for whom absolute accuracy in time is essential. In other words, this clock is the one that tells all of America just what time it actually is!" At this point, we are told, Mabel Babel, who didn't own a wristwatch, opened her purse and took out a huge pocket watch (a legacy from her dear father), looked at it, and said "Yes, and your clock is only two minutes fast!"

Even if the story isn't true, that's the kind of person she was, which is one of the reasons why  will remember Mabel Babel!

# THE BATTLE FOR THE FALKLAND ISLANDS

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**D**id a security leak from the British Parliament cause the Falklands War? Did secret intelligence from SIGINT and other sources deceive the British government into thinking the Argentines would never invade? Why did the British Navy begin planning a full-scale amphibious task force operation to reconquer the Falklands a week before the Argentines invaded? Why were telecommunications between the Falklands and London completely out of operation for half a day just as the Argentine landings were taking place?

Max Hastings and Simon Jenkins raise, and to some extent answer, a number of intriguing political and military questions about the Falklands crisis which are a revealing commentary on modern diplomacy, democracy, and war.

The book emerged from an agreement between Jenkins, the political editor of the Economist, and Hastings, a war correspondent for the Standard, made the day before the task force sailed on 5 April 1982, that if a war broke out Jenkins would cover events in London and Hastings would cover the battle. Six months after the war ended they wrote the book and jointly developed its conclusions, using not only the information available during the Falklands war but interviews after the war with almost all of the central figures on both sides of the Atlantic (including Argentina), to try to reconstruct what actually happened, how it happened, and why.

The book is a thesaurus of interesting details, many of which did not crop up in the current reporting; e.g., during the land battle on East Falkland, two reporters discussed the operational plan for a coming battle over the Falklands telephone system. The British military authorities were not sure the Argen-

tines were monitoring the telephone circuits, but they were displeased and banned all reporters from all operational briefings after that. Just before the key battle at Goose Green, fought to satisfy domestic political needs in England rather than for any military need in the South Atlantic, the BBC World Service announced that the Parachute Regiment was advancing onto Goose Green. The Argentines, hearing the broadcast, alerted their defenses, and were ready and waiting. Regimental Commander H. Jones was killed, and casualties were noticeably higher because of this BBC report (p. 239). The writers concluded that the competitive pressure for scoops and newspaper sales, combined with the jockeying for party advantage, led to a lot of disclosures in the British media which only helped the Argentines. Quite an admission from professional journalists.

Jenkins' insight into the London political scene gives an illuminating counterpoint to Hastings' reporting of the battle itself. One of the key military matters was the failure of the Navy to gain air supremacy before the amphibious landings took place; the air battle only then began in earnest because the Navy had stayed out of reach of the Argentine planes after early ship losses such as HMS Sheffield. Another key matter, according to the book, was the dearth of accurate or useful intelligence of a military or political kind. The authors claim that the US did not provide the UK with even a single satellite photograph during the entire Falklands episode (p. 322).

SIGINT is mentioned, but only in passing, with the gratuitous revelation that a US intercept site in southern Chile was an important source (pp. 58 and 142). Order of battle information was known in London from some source, but the local commanders were apparently not told whom they were facing or



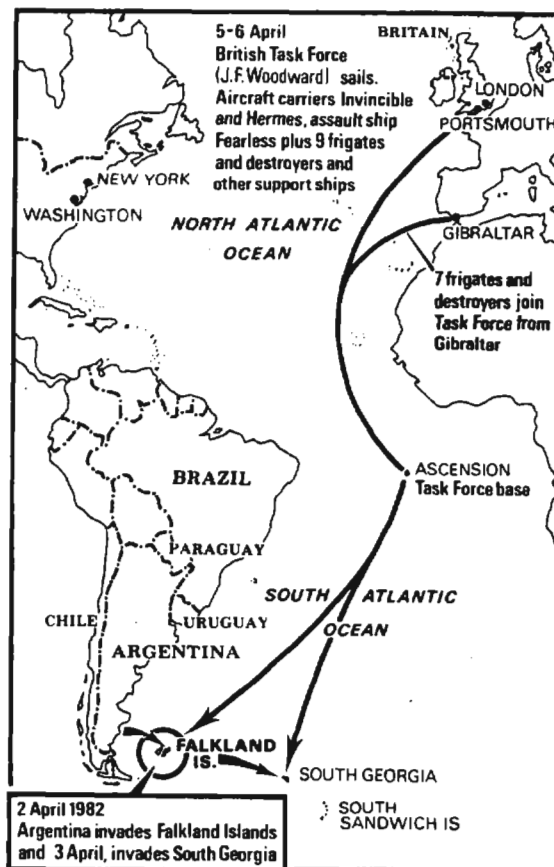
where they were located (p. 252). The fact that the war occurred at all was an enormous failure in both intelligence and diplomacy by Britain, Argentina, and the US. The British did not believe the Argentines would invade without a long ritual of warning, while the Argentines never believed that the British would go all the way to the South Atlantic to recapture islands they had been trying to hand over to the Argentines for 17 years. The British Navy utterly misjudged the air and missile threat. The Argentine government utterly misjudged the American, Russian, and UN reaction to their bloodless occupation of the Falklands. The Americans were astonished by the readiness to fight on both sides.

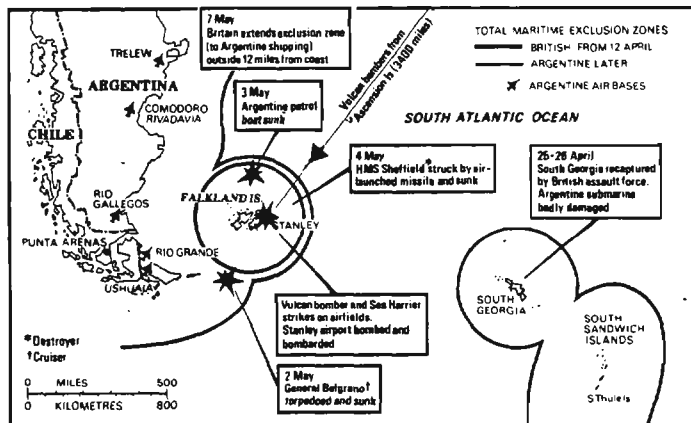
The book describes the war as a "freak of history," noting that the British training and tactics that worked against the heavily armed Argentine troops, by disrupting their defensive posture, would not work at all in Western Europe. The Navy, which was about to be dismembered before the war, lost ships and men, but emerged much stronger in defending its role and its budget. The Argentines, in the opinion of the writers, were disadvantaged by their use of US tactical doctrine, which made them dependent on masses of material and motor transport rather than on troop training and competent officers. When they surrendered, they had been unable to feed their troops, but huge stockpiles of new weapons and food were clustered in Port Stanley, unused. Supplies, and the ability to move them in quantity over a beachhead when the enemy held air superiority, were crucial to the British campaign, but the politicians in London were oblivious to this problem, and chafed for immediate attacks. The ground commander, Major General Thorpe, spent most of the war sailing south on the QE2, arriving with his staff only after the most critical battles had been fought, because there was apparently no way to get them to the scene quickly.

Among the points made in the book, the UK forces--many of which had not seen real action since World War II--were all eager to demonstrate what they could do, while the Argentine army had no concept of how to fight a real war. Only the Argentine air force, which was reluctant over the Malvinas occupation, fought well, and they nearly defeated the British Navy. The Argentine ground forces failed to counterattack the landing on the critical first day, even though their air force had broken through the British navy defenses and were disrupting the operations in San Carlos Bay. During the ensuing land battle Argentine officers did not stay with their men, while the British NCOs and officers led their troops. (A sergeant and a lieutenant colonel of the Parachute Regiment both got the Victoria Cross posthumously, and there were many

other medals.) The British were always confident of winning the land battle but the sea battle was much closer than expected, primarily because of inadequate defense against air attack and missiles.

Before the war, the British government felt that the Falklands were expendable compared to British trade interest in South America, and tried to solve the problem by manipulating the islanders (p. 16). The Argentine Junta thought a military takeover of the Falklands would cause no more fuss than the Indian takeover of Goa. Special Intelligence, including SIGINT, predicted a crisis in 1977 which did not materialize and, after this false alarm, was reluctant to cry wolf in 1982 (p. 36). The Foreign Office was better at dealing with foreign governments than with its own and could not get support in Parliament for a transfer of sovereignty. Nevertheless, the Thatcher government denied British passports to Falklanders who did not have a native-born British parent, and this was seen by the Argentines as an abdication of British interest.





The Franks Report, the official British inquiry into the background of the Falklands conflict (which concluded that the government was not to blame for the invasion but had not been kept accurately informed by the intelligence assessments), claimed that the secret intelligence before the war was a poorer indicator of Argentine invasion plans than articles by knowledgeable insider journalists in the Argentine press. The invasion occurred on 2 April, but on 28 March the JIC (Joint Intelligence Committee) said no invasion was imminent. The government intended to send submarines to the coast of Argentina covertly, negotiating until they arrived, then announce the submarine threat to deter an Argentine invasion fleet from leaving port. However, the Parliament leaked the plan on 29 March, before the HMS Spartan actually sailed. The Argentines immediately put to sea, to accomplish the invasion before the submarines arrived. Apparently, this political leak was the trigger for Argentine action (p. 64). The cabinet, knowing from SIGINT that the invasion would occur on 2 April, was asleep when it took place. The Argentine media broadcast the impending invasion before it occurred. The communications between the Falklands and UK were inoperable during the invasion, and the government learned the results from the Argentine media reports (p. 74).

Once the public feeling in Britain had been aroused by the invasion, the Task Force had to put to sea by 5 April before the sense of national purpose evaporated (p. 92). The Royal Navy had planned the large naval operation on 29 March, recognizing immediately that naval power and shipping were the crucial elements in the combat and logistics of such a distant crisis (Chapters 4 and 5). British diplomacy, fumbling before the invasion, moved quickly to marshal international support and a UN Resolution 502 against Argentina (p. 101). The UK feared the Americans would be as unreliable over the Falklands as they had been over Suez, but US support was extremely good (p. 142).

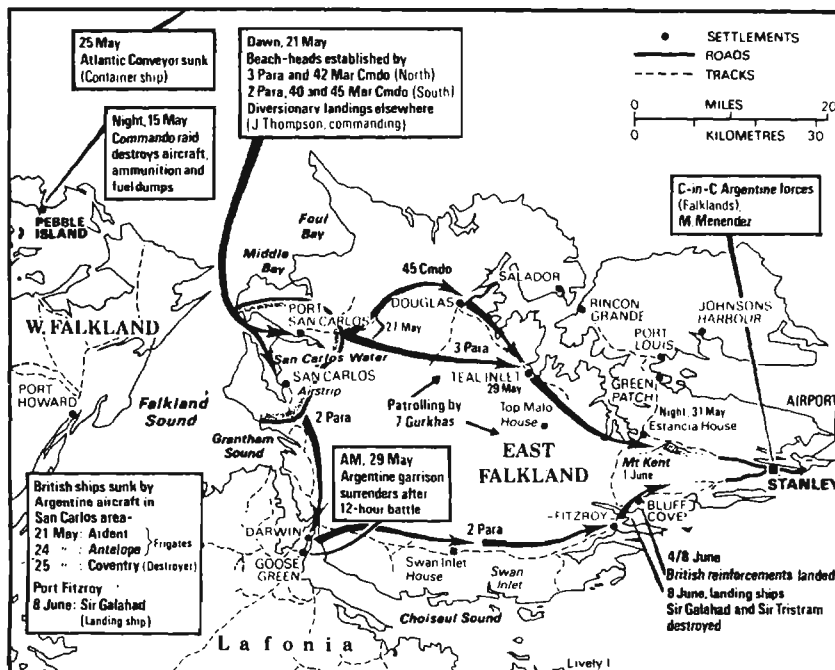
The British Navy expected a walkover but was nearly annihilated (p. 115). Many Navy officers could not believe that there would be no AEW (Airborne Early Warning) protection for the Task Force (p. 117). AWACS support to the British was denied to prevent US direct involvement (p. 142). There were many interservice communication problems on the British side because the autocratic Navy chain of command was very different from the flexible Army staffwork (p. 122). The politicians and civil servants in Britain were kept ignorant of the operational concerns and difficulties of the impending war (p. 124). This made them critical and impatient of

delays and reverses.

The sinking of the Belgrano was a political defeat for the British because it was not seen as strict self-defense (p. 149). Because of the lack of AEW, the Sheffield was not firing chaff clouds to offset a possible missile attack, and the missile was launched only a few miles from the ship by a low flying Argentine plane. Until that moment every man in the fleet had been living with the image, rather than the reality, of war.

The early warning against the land-based aircraft was given by a combination of submarine sightings and SAS teams ashore (pp. 157, 162, and 207). Apparently radar and SIGINT detection of the takeoffs were not available. The British strategy of crushing the Argentine air force before the amphibious operation was negated by the Argentine refusal to risk their aircraft against the dangerous Harriers until the British forces committed themselves to a beachhead (p. 161). Since they could not sail home without a land battle, the British government and service chiefs cast aside the rules for amphibious warfare and went ahead without air supremacy. After the loss of the Sheffield, the politicians began to lose confidence in the Navy and sought negotiations after a 5 May emergency session, but Argentine Foreign Minister Costa Mendes mishandled the opportunity and the war was resumed (pp. 167-8).

The British forces got no intelligence of value from the Falklands population during the occupation (p. 177). SAS teams had no burst-transmitting radios and had to keep to terse reports to avoid the "Argentines' excellent modern interception equipment" (p. 181). Despite Soviet surveillance ships and satellites, the Argentines after the war denied that they got any intelligence from the USSR (p. 182). British geographic intelligence came fortuitously from a Royal Marine officer who commanded the Marine detachment there in 1978 and had written a navigational guide to



The Two-Pronged Attack towards Port Stanley

the islands. The Marines sent to land on the beachhead had been trained for arctic warfare in Norway, a fortunate coincidence, but there was only one Spanish-speaking member of the brigade. The invasion plan was based on the use of large helicopters to move men quickly to Port Stanley from the distant beach head at San Carlos, but the Argentines sank the ship carrying them and the troops had to march overland in a blizzard and freezing rain. Argentine attacks on British ships in San Carlos Bay would have been even more destructive had not US export laws blocked the sale of a technical manual that showed how to arm the bombs to explode after a short flight (p. 228). This export limitation on technical data (which no other nation practices) saved hundreds of British lives.

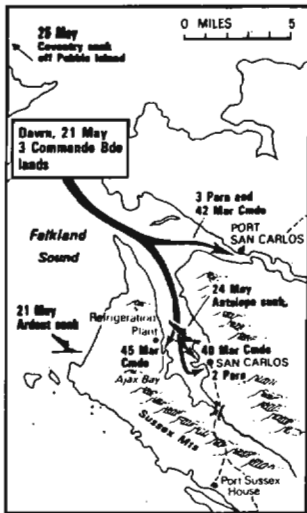
Communications were often very good or very bad. Over 100,000 messages were passed on the command ship Fearless before the war ended. Although not mentioned in the book, the merchant ships requisitioned for logistic support lacked cryptoequipment so that their messages were passed in the clear by HF [1]. The British troops put all their cryptoequipment on one landing craft, which the Argentines sank, so they had to learn to use manual systems and codes in the middle of a battle [2]. When the Argentines surrendered, a portable satellite terminal was used to transmit the details between London and the negotiating table in Port Stanley. MGen Moore on the QE2 had an expensive Scott Satellite communications system to enable him to command the battle remotely, but it didn't work, and he only

arrived to give orders at the last stage of the battle (p. 269).

The failure of a shipboard satellite station to work under war conditions is a point that should be borne in mind, for MGen Moore had to depend on HF circuits during the critical first week of the land battle.

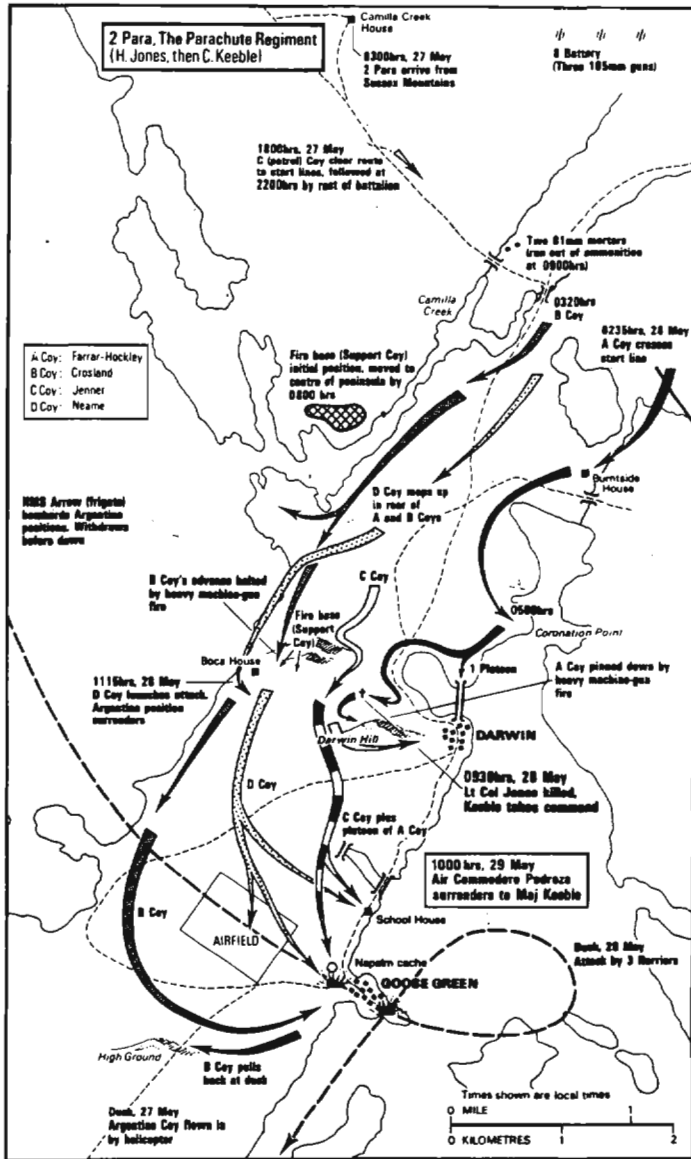
The battle at Goose Green, fought to satisfy domestic political needs in England, would have been a slaughter had the Argentines used their advantages in numbers, equipment, and position. The defenders were three times stronger than the attackers (p. 251). London knew from SIGINT the exact order of battle in the Falklands, hence knew the strength at Goose Green, but did not pass that information to the attacking paratroops (p. 252). Fighting in open terrain, some of the British paratroops abandoned their submachine guns and picked up the Argentine rifles, which had greater range and hitting power (p. 244). Naval gunfire and artillery flown in by helicopter were used initially, but hand-carried rockets and mortars then became crucial to breaking the well-prepared Argentine defenses (pp. 241-7). The Argentines had supplies of napalm but the British had been using white phosphorus, a chemical weapon with equally horrifying effects (p. 321).

After Goose Green, the marines and paratroops marched 40 miles across the Falklands in a freezing rain because all the helicopters were needed to move supplies and wounded. The marchers began 27 May and arrived at Mount

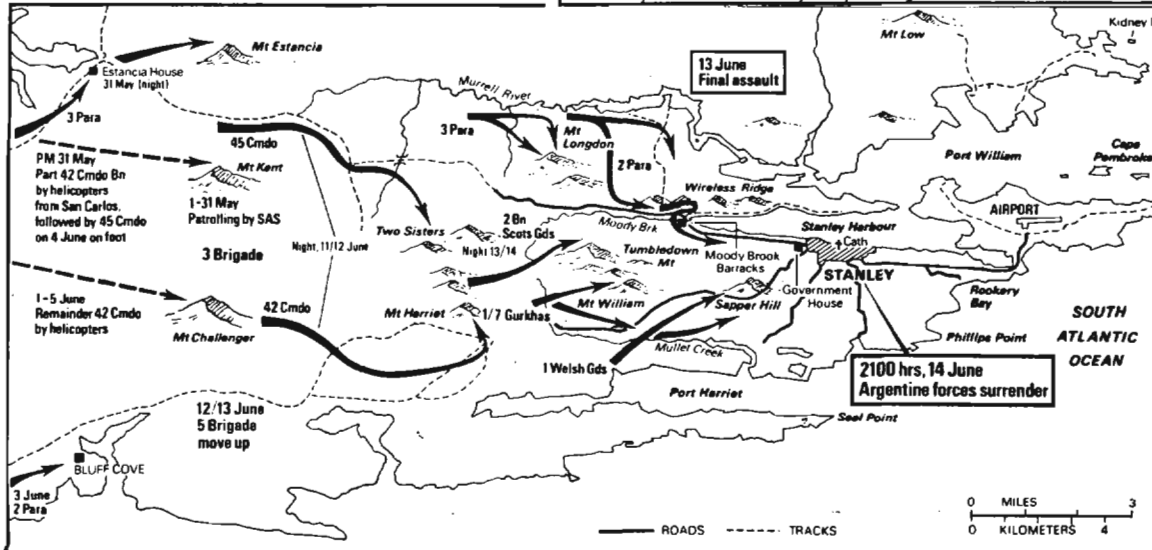


The Landing at Port San Carlos

The Battle for Goose Green



The Battle for Stanley



Kent on 4 June. The final attack on Stanley was made on 13 June. The weather and exposure produced a lot of trench foot and frostbite, and the cardinal problem was to get the final battle started before the elite troops were reduced by the continuous cold and wet. A small force captured Mount Kent on 31 May in a helicopter night attack made possible by US-supplied night vision equipment.

For various reasons, a Welsh regiment was on board the landing ship Galahad at Fitzroy, waiting for small craft to ferry them across a cove on 8 June, when four Argentine aircraft attacked. A bomb ignited gasoline aboard the Galahad; 51 soldiers on board were killed and many others suffered severe burns. The Harrier CAP had been drawn off Fitzroy by an attack which minutes earlier damaged the frigate Plymouth. The Welsh troops had been aboard the Galahad for five hours without disembarking. Afterwards this was called a calculated risk (p. 282). Because it was bad news, when good news was awaited, the Fitzroy incident was perceived in London as a political disaster (p. 282). This reflects the close interaction between domestic politics and military events in a remote-area war.

Because the air dimension was so critical to the Falklands War, the whole battle hung on a small number of exhausted Harrier and helicopter pilots and maintenance crews who kept their few aircraft flying and fighting week after week. The British ground forces found that night operations by their highly trained troops were quite effective against the entrenched but demoralized Argentines (p. 292). These were usually launched through minefields. On 12 June the last British attack at Tumbledown Mountain outside Stanley was accompanied by 6,000 rounds of artillery fire and naval gun support (p. 305). This produced a major Argentine retreat. The Argentine officers were apparently not around to control the situation (p. 307). Improvised psychological warfare, using the one Marine who spoke Spanish, quickened the surrender.

Starting with a solid core of well-drilled tactical skills, equipment, long-service troops, and vigorous officers, the British forces were compelled by the climate and the losses of ships and equipment to improvise and take many risks. It was a very "iffy" battle, which might have been a major naval disaster. The cost-cutting scheme of tailoring military and naval forces to a very specific NATO scenario proved very expensive in the end. The war cost about 1,000 casualties, six ships sunk and ten damaged, and nine aircraft lost, representing about a billion pounds sterling in lost and damaged equipment. The operation cost about 700 million pounds (p. 317). The lack of adequate reserves of equipment, such

as helicopters, put the campaign at great risk even though the Argentines had never fought a war and had no idea of how to use the resources they had.

Overall the book is fairly critical about the actions of the British government before and during the war, but generally adulatory about the fighting forces. Hastings apparently had very good rapport with the military services and huddled in foxholes with the forward combat elements during much of the land battle. When the cease-fire occurred, he was one of the first people into Stanley, still wearing his camouflage paint and battle kit. An earlier book on the Falklands war by the Sunday Times Insight team was much more critical of the British combat operations, and also of Hastings, who was regarded as an uncritical loyalist. While Hastings and Jenkins criticized the press for the way they handled the war, the earlier book criticized the war for the way it handled the press.

#### Conclusion

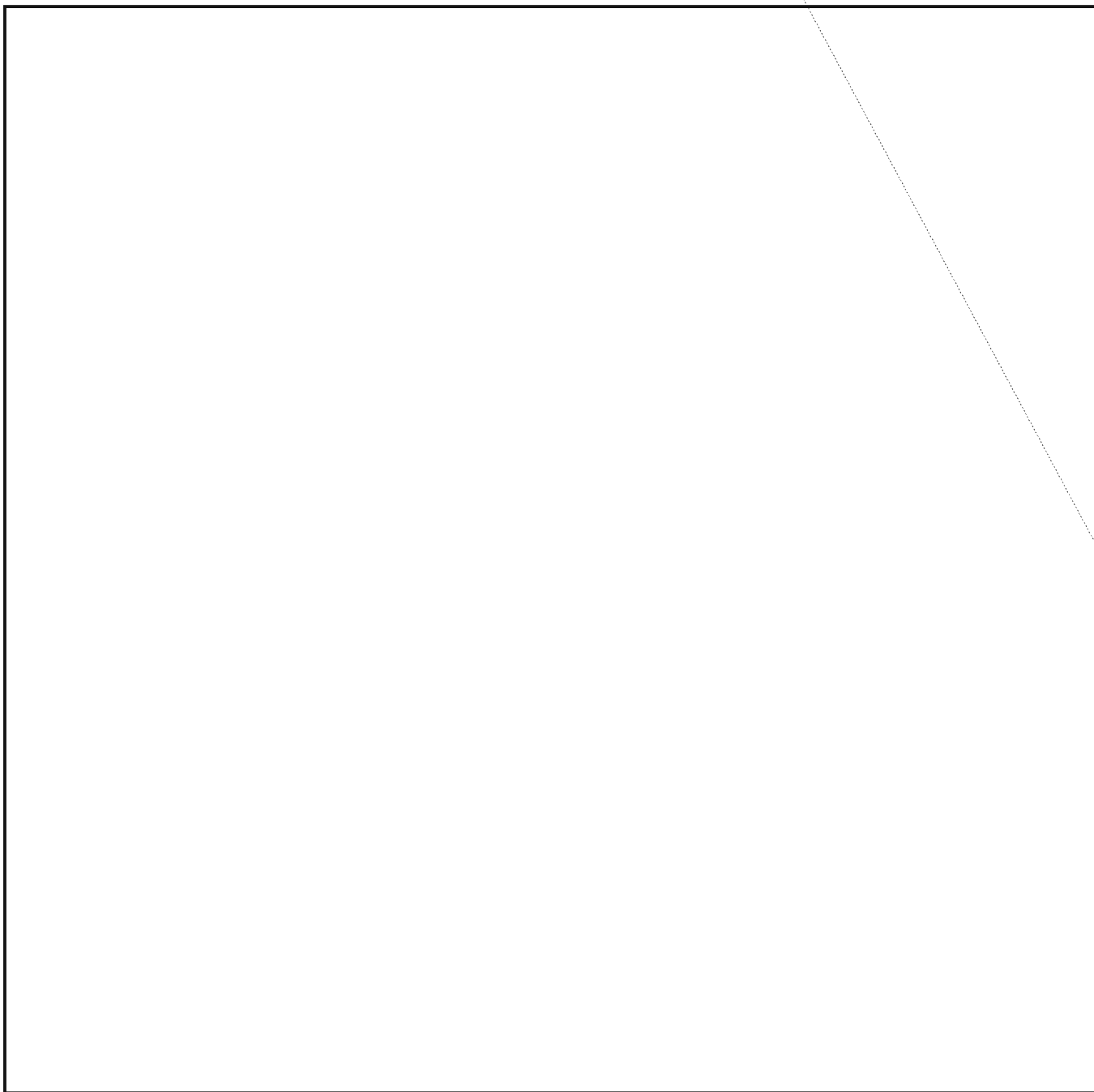
Unlike the precision operations of the Israelis in wiping out targets in the Middle East by perfect use of intelligence and weapons, the Falklands War was a battle of unplanned contingencies, politics intermixed with tactics, horrendous security leaks, interservice quarrels (on both sides), tangled and unreliable communications, profound lack of knowledge of the enemy, fumbled opportunities, and enormous stresses on the commanders and the men, who knew the war could be lost in half a day. Despite the fact that it was a "freak of history,"--viz: the first colonial war fought with modern weapons, electronics, and communications during a virtual Antarctic hurricane--the Falklands War was highly revealing about the operations of the military forces and the complicated tug-of-war between military reverses, tactical delays, media reports, and the vacillations and political jockeying in the opposing capitals. These political-military interactions are described quite well in this book. As more information comes to the surface, the ironies, surprises, and afterthoughts of this precarious struggle, where both parties fought at the limits of their military reach, may contain more object lessons on the nature of modern conventional war in remote areas than any battle in the last 40 years.

#### NOTES

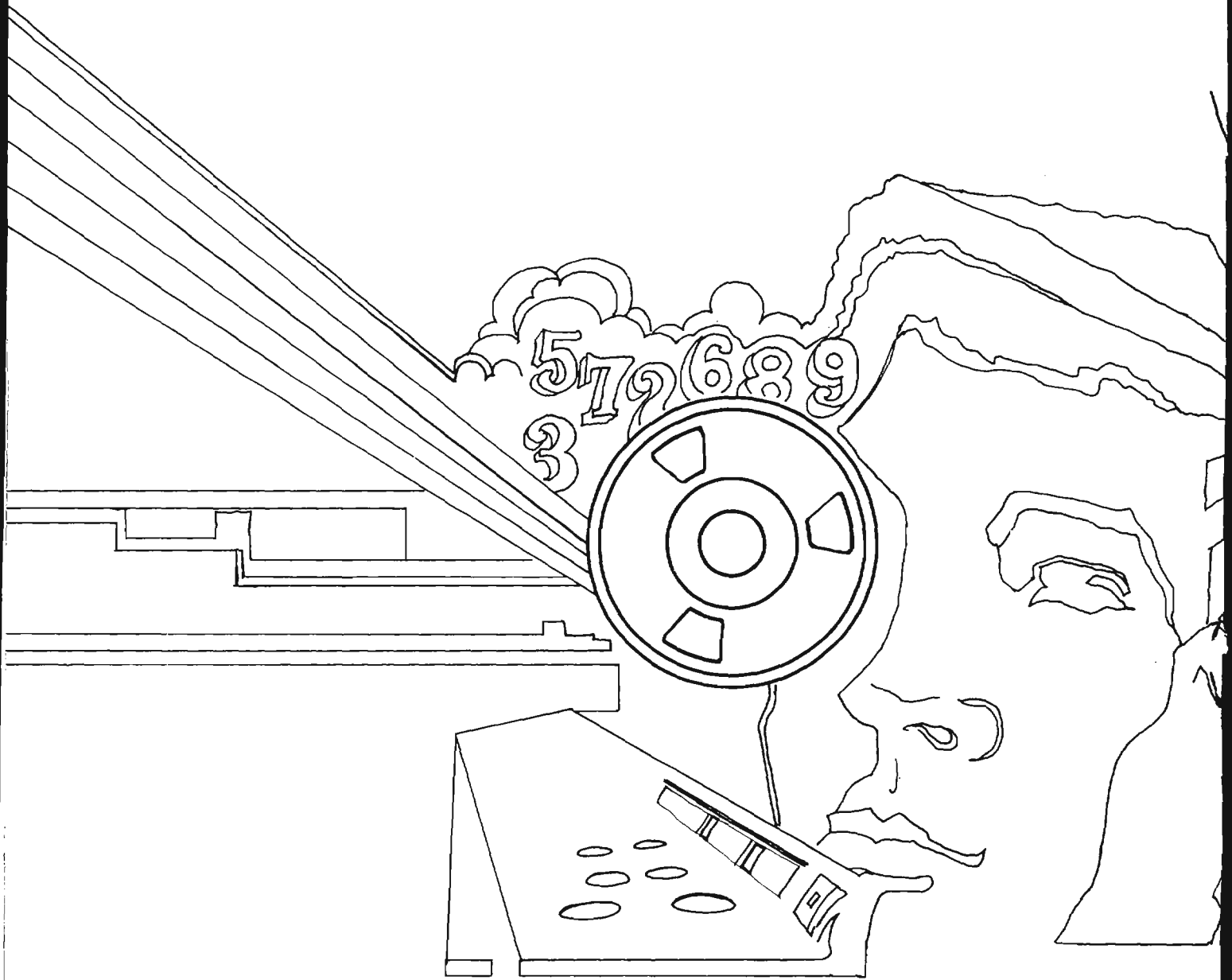
- [1] SIGNAL, Dec 82, p. 84. "War in the South Atlantic--The Naval Communicator's Challenge."
- [2] SIGNAL, May 83, p. 105. "Falklands Islands War--A Signaller's Viewpoint."

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