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NATIONAL SECURITY AGENCY
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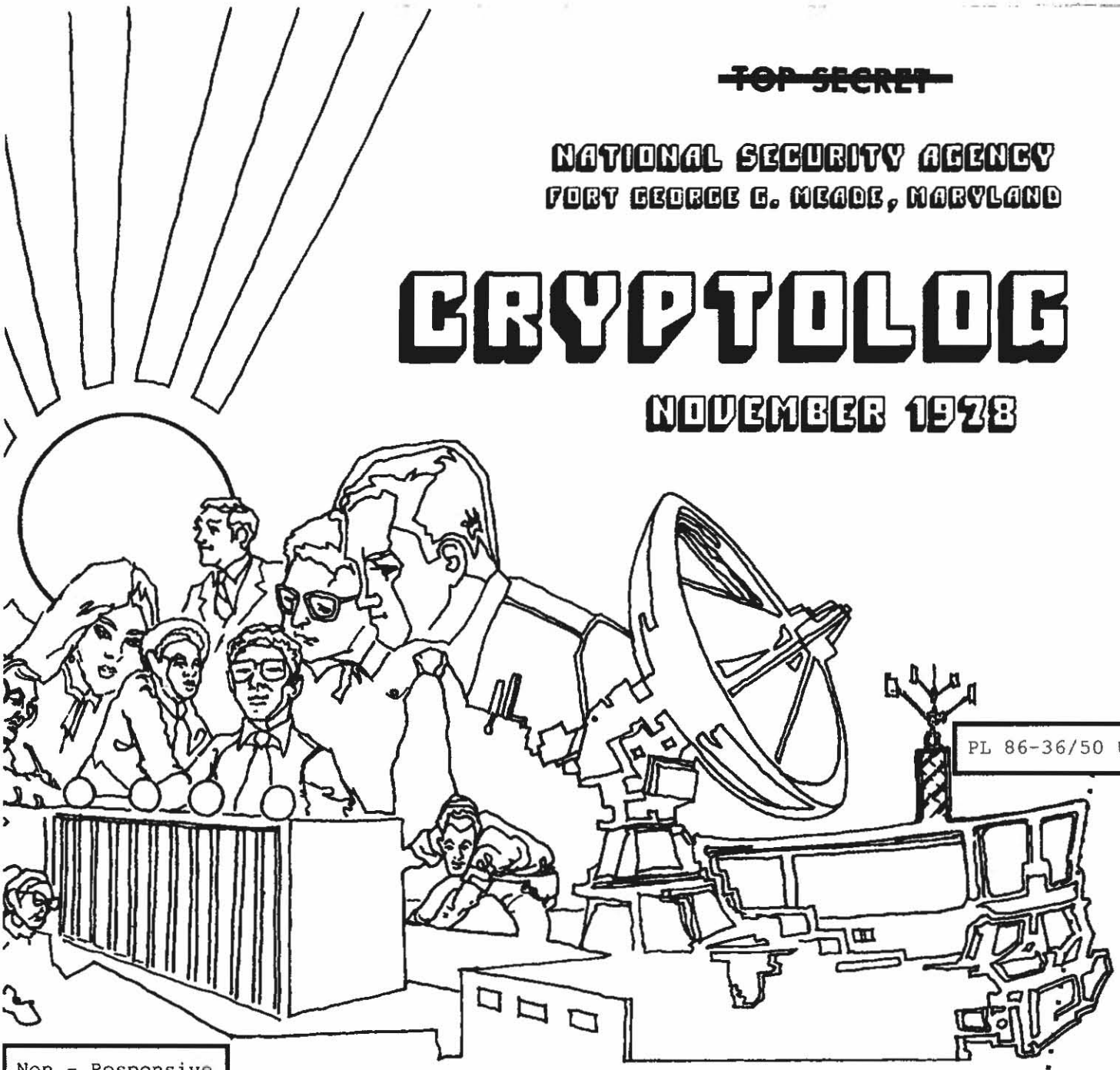
CRYPTOLOG

NOVEMBER 1978



PL 86-36/50 USC 3605

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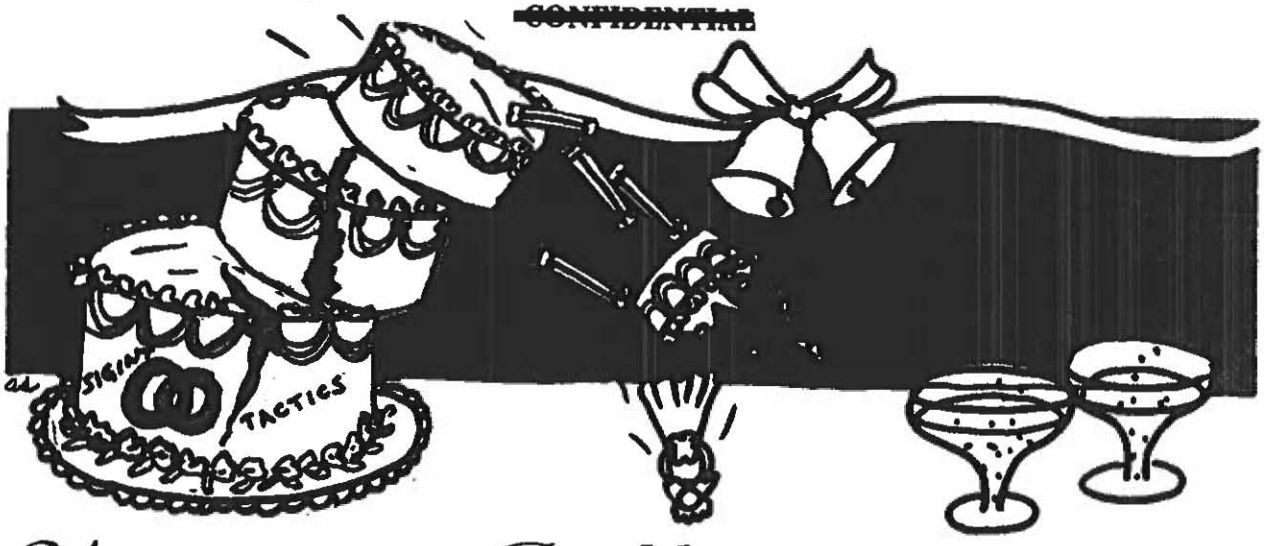

Wedding Bells and That Old Gang of Mine

PL 86-36/50 USC 3605

E. LEIGH SAWYER, B4

There was a time when Okinawa had not yet entered the age of dual highways, sky-high prices, yen currency, and the closure of the "big club" on RYCOM Plaza. I was fortunate enough to be Chief, NSAPAC Okinawa, in that era -- 1959 to 1961, to be precise. Not only was I much concerned with the operations of USM-3 at Sobe, USN-25 at Futenma (and later Hanza), and USA-68 at Onna Point, but, as well, with the trigger-pulling types at the 313th Air Division and the 3rd Marine Division.

One recurring duty that I had from time to time was to enter CRITIC drill messages into the system. These came to me consistently from NSA by means other than normal CRITICOMM to ensure that USM-3, which relayed communications to our office, did not learn of the upcoming test and thereby be geared up for it. Without fail, so it seemed, my instructions were to inject the CRITIC test into the system at a precise time ranging usually between 0200 and 0400. This meant driving out in the wee small hours of the morning, usually to USM-3 since Torii Station seemed to be a favorite target of these tests. Of course, at that hour the station was at dead low tide, with only a handful of 05Hs in the intercept rooms. My job was to drop off the instructions for the CRITIC test at a position and then let nature take its course. The scenario was predictably fairly pro-forma. I would say to the intercept operator, "This is a CRITIC test and instructions are on this piece of paper." He would look at me as though he had just discovered me under some flat rock and say, "You're kidding me." (Well, not exactly that, but euphemisms do have their place.) I would reassure him it was for real and would leave as he was streaking out to find the trick chief.

Well, this sort of thing happened periodically. Every time it did, [redacted] the station CO, was just a bit cool toward me for a few days. I even got wind that he was seeing if there was any legal way to keep me out of the station at odd-ball hours and also to instruct the front gate guard to tip off Operations if he spotted me driving in at strange hours. I could sympathize with him and, since we were fast friends, I must admit that I felt like a heel at times.

I believe it was one time, returning to my office from Onna Point, when I did a bit of hard thinking about this CRITIC test business. I had just given my driver one of my regular drills for him to learn how to say "lollipop" and "lalapalooza" instead of "rorripop" and "raraparooza" (he eventually learned, by the way). Then, settling back for the remaining 30 minutes of the ride, I did some soul-searching on the bottom-line payoff of a CRITIC. I decided that essentially there are two bottom lines:

- a startling event of probable great interest to CRITIC recipients, and
- much more significantly, an event that the United States would react to by doing something.

The second obviously ranked far higher than the first. Then I wondered to myself who in the United States would in fact do something on the basis of a CRITIC. The answer to this obviously lay in what the CRITIC said. It might be an event to prompt a presidential foreign policy speech in which the admonition of "Don't do it" to a foreign power would be unmistakable. On the other hand, it might be the sort of thing

requiring U. S. action ASAP in the most literal sense. This struck me as being analogous to the human nervous system. In some instances, there is time for the brain to react to stimuli and pass advice back to the right forefinger that it would be prudent not to touch the hot stove. In others, there is no time for leisurely action, such as when the reflexive nervous system advises the right forefinger to get the hell off the stove because it's hot. In terms of the latter situation, covered by the buzz term "quick reaction" these days, the CRITIC testing system that I was involved in at the end of the line seemed pretty pointless. How about the people on Okinawa who were "trigger-pullers"? How did the CRITIC system work with them? Had anybody ever tried to find out? What was the communications situation? Secure hot lines? Etc., etc. I determined to find out and to do something about it.

What I conceived was a locally generated CRITIC test to originate at USA-68 (threat of air attack) and be passed via existing communications paths to 3rd MARDIV and 313th AD. The basic goal was to determine the time elapsed until the 313th AD was scrambled and brakes released for those fighters on strip alert. For the 3rd MARDIV, I visualized perhaps troop dispersal from the barracks. I decided to call the project WEDDING BELLS since I was basically trying to marry the result of a SIGINT process to a tactical organization that presumably might be obliged to take immediate action.

I expected complete cooperation from 3rd MARDIV since I had been holding their hand for some time to get them out of the category of SIGINT neophytes. This included, among other things, my devoting a fair amount of time in assisting [redacted] the G-2, in setting up an SSO shop. In any case, [redacted] Assistant Commanding General, was most receptive to the WEDDING BELLS concept when I tried it out on him. The 313th AD was equally enthusiastic.

Less enthusiastic were my boss at Camp Fuchinobe and the Commander of AFSS(PAC) in Hawaii. The former directed me in no uncertain terms to exclude 3rd MARDIV from the drill for reasons never made clear to me. The latter visited me personally on Okinawa (in fact, I was his tenant at the 6922nd RGM at Kadena) and left me with the unmistakable impression that I was trespassing upon sovereign territory. So there I was, caught in the middle between local enthusiasm on the one hand and cold water dripping down my neck from remote points on the other. In retrospect, it is apparent that I erred by going too far locally before getting a "green board" up and down the line beyond the low water mark of the shores of Okinawa.

As I proceeded with the spade work to set up the test, one interesting wrinkle came to light. Although there was a secure hot line from Onna Point (USA-68) to the 313th AD at Kadena, no secure line existed from Kadena to the defensive wing of the 313th at Naha -- only an open commercial line. This in itself was an interesting revelation. To get around this, we shelved any ideas about manufacturing SIGINT for a CRITIC test and decided simply to use "WEDDING BELLS" for the text. There was even one suggestion to send the message from Kadena to Naha by courier to point up the communications flaws. Cooler heads prevailed, however.

There is no need to embellish the details of the test. Suffice it to say that it took [redacted] I reported the results to higher authority, hoping somehow that a spark might be struck to pursue this test concept further and to enable the fixing of glaring loopholes that might become evident. If, in fact, a spark was struck, ignition failed.

In the 2 June 1978 issue of the *Far Eastern Economic Review* there appears a penetrating item on the roles of the U.S. 13th Air Force and the 5th Air Force. Among other things, one reads, "The might of American air power in the Philippines and Japan is on the alert for 'the call in the night' -- maintaining a ceaseless watch on North Korea as well as standing by for any one of a dozen potential crises in a vast area stretching to the far side of the Indian Ocean." This is comforting except for "the call in the night." The experience of WEDDING BELLS in 1961 still makes me uneasy.

~~(C-SCO)~~

A SMALL PROBLEM
Wayne E. Stoffel, P14

[redacted]

~~(C)~~

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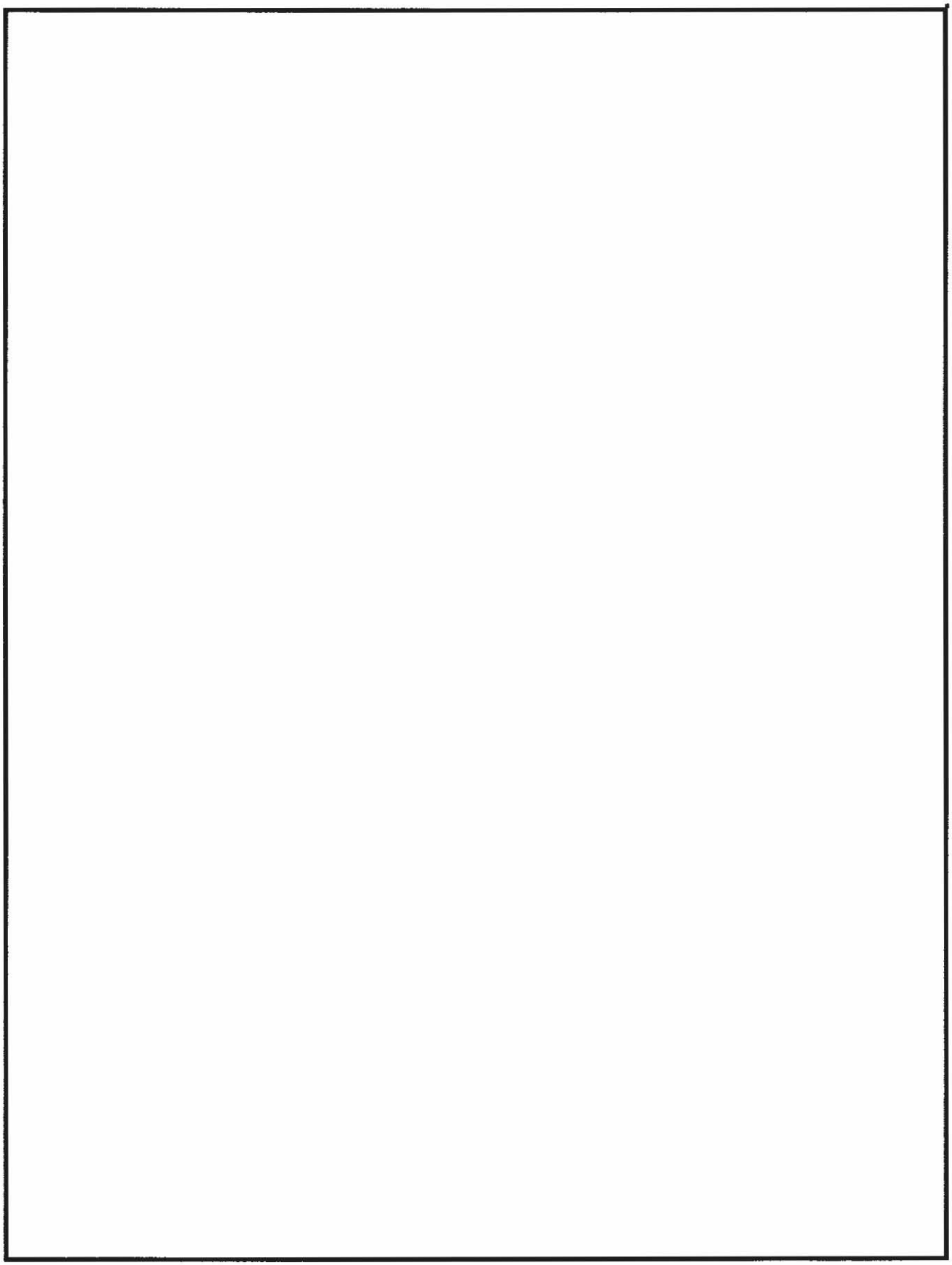

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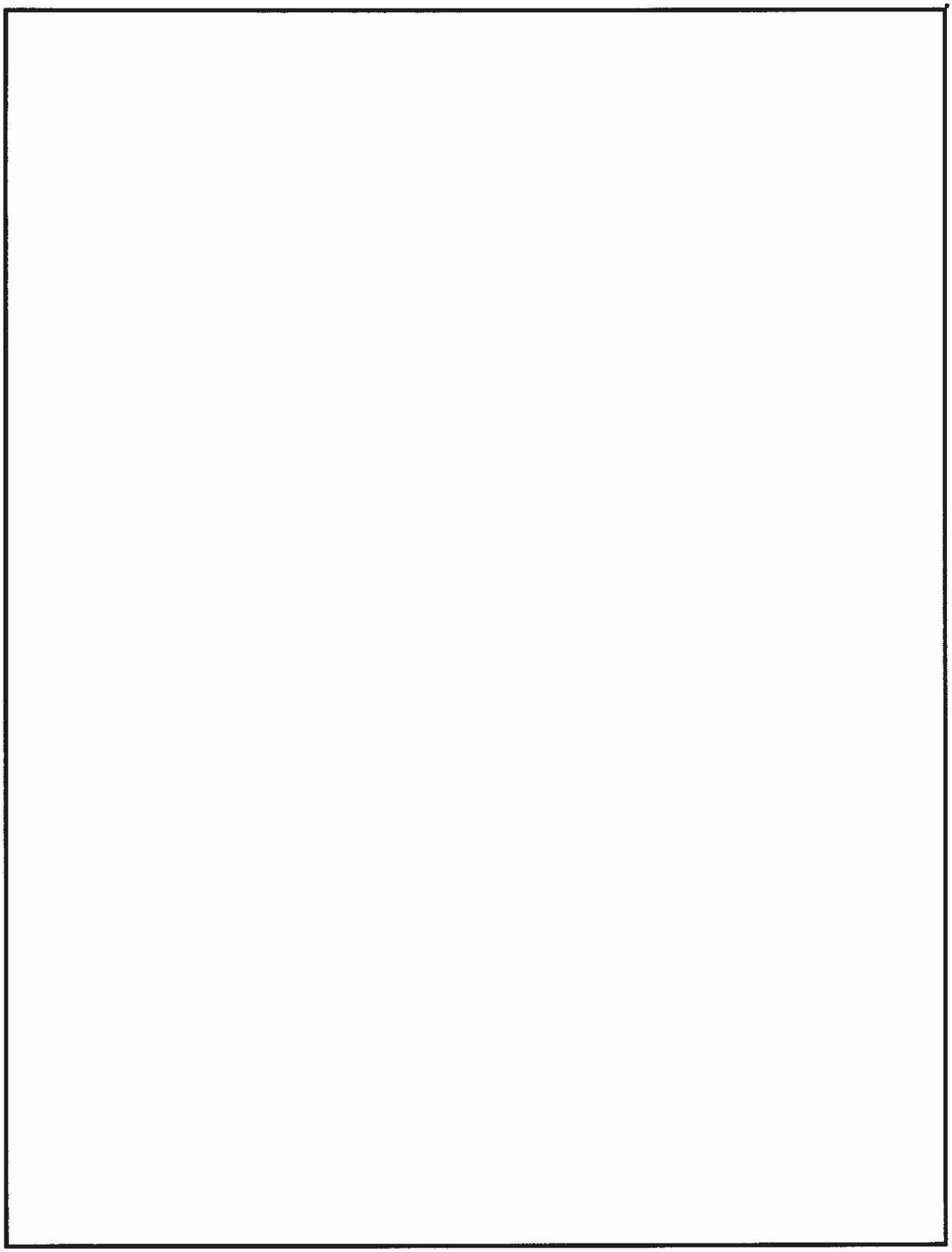

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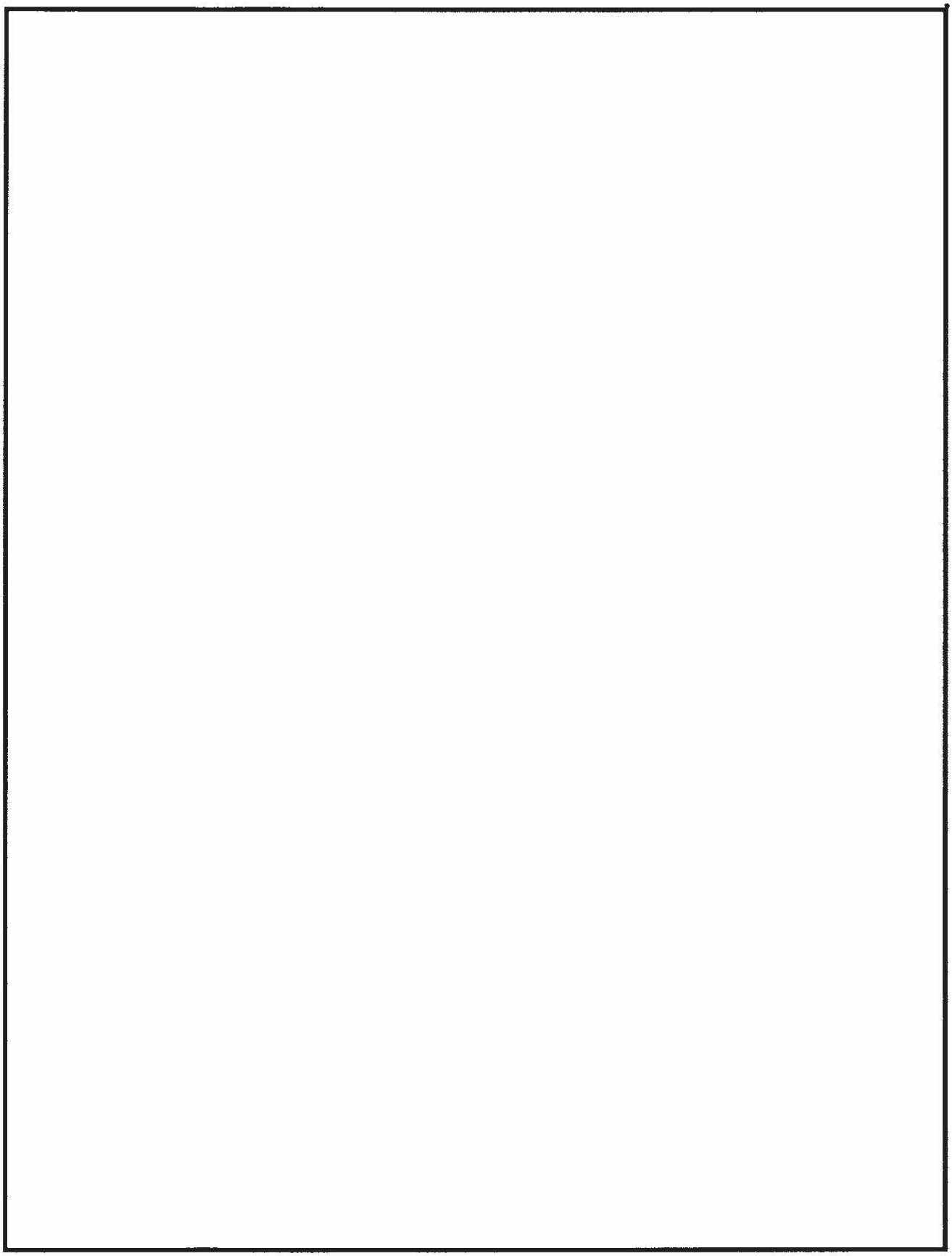

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PL 86-36/50 USC 3605

LINGUISTICS AND THE CODE RECONSTRUCTOR

PL 86-36/50 USC 3605

STUART H. BUCK, P16 (Retired)

Let me hasten to point out that I make no pretensions to more than a very limited knowledge of modern linguistic theory. It was my fate to be born several decades too soon. By the time I entered college, language majors were expected to delve deeply into literature and history, but that was about it. Philology, as it was called then, was regarded as a field for specialists, not as a requirement for an AB in Romance Languages. I remember once suggesting, rather timidly, that I would like to take a one-semester course in phonetics. My tutor knocked that one down quickly. Such an aberration, he pointed out, would conflict with a course on Voltaire, which would stay with me longer. He made it sound like a steak dinner. And so the advent of Bloomfield and his disciples caught me preoccupied, first with Voltaire, and then with the Great Depression, when it didn't seem to make any difference what kind of linguist you were -- everyone suffered equally. I can make one small claim to fame, however. Carl Darling Buck, the great philologist, and I are distantly related. Moreover, Carl Buck was Leonard Bloomfield's teacher. That ought to count for something. I wish that I could settle for that, but total candor compels me to reveal that my learned relative and I share a common ancestor, one Colonel Jonathan Buck, who is reputed to have burned a witch back in the 18th century. So much for name-dropping. . .

I have mentioned all of this in order to explain why I was such a late-bloomer in the field of linguistics. It wasn't until I arrived at Arlington Hall over 30 years ago that I realized something was going on that I knew very little about. After the war, I received some free benefits when my older brother decided to get his PhD in linguistics. He not only tested each theory on me, but passed on many of his textbooks, hoping that they would do me some good. In self-defense, I began to read through them. I started with Bloomfield -- and discovered that there was a whole new world waiting out there. Then I read Bloch and Trager, and found them informative, but not likeable. While this sort of desultory reading was going on, I became deeply involved in bookbreaking -- or, to use a term that I prefer, *code reconstruction*. Before I retired in 1973, I had worked on a great variety of codes, involving seven different languages and including three countries whose traffic had never been read before. I know that this sounds boastful, so I shall hasten to add that I still consider myself a novice in the field. I have seen a lot, but not all, of the elephant, so give me credit for being aware of that gloomy fact. One result of all this knocking around was that I acquired a compulsion to talk and write about my experiences, remembering that when I started out, no one told me anything. Not a word was uttered in my presence regarding tools, techniques, or standards. The implication was that either you could do it or you couldn't -- it was just as simple as that.

Plopped into My First Assignment

My first assignment was to crack a [redacted]. To help me concentrate, I suppose, I was moved out of [redacted]. To assist me, I had three cryptanalysts (nonlinguists, of course) who waited, rather impatiently I thought, for me to get going. Well, this is all ancient history, so I won't dwell on it, except to note that I broke the code eventually, although it took a lot longer than it should have and gave me mental anguish that could have been avoided.

Throughout most of my career, I have been a loner. On the few occasions when I have worked with another bookbreaker, I have discovered a curious reluctance on his or her part to talk about methodology. Usually it was a case of "That's what it means because I say so" or "If you challenge my results, you attack me

Stu Buck retired from NSA in 1973 but returned to P16 several days a month as a reemployed annuitant to work on a special project requiring his unique qualifications. When he was finally debriefed at the conclusion of that project in October 1977, he handed over to a few coworkers copies of papers they might still find useful. Among those papers was the text of a talk Stu had given in September 1974, which is published here as sound words of advice for the next generation of people to carry out what Stu calls "one of the basic missions of the Agency."

Ed.

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as a person." After you have had your head bitten off a few times, you tend to be less talkative -- unless you enjoy name-calling for its own sake. In my experience, the great exception to this cantankerous type was Betty Doane. May she rest in peace! Betty was not only completely honest, but was not afraid to lay all her cards on the table. She never hid behind a mystique, and there was no chip on her shoulder as big as a plank. Everything was out in the open for all the world to see (those with proper clearances, I hasten to add). She was feisty, tough-minded, completely logical in all of her arguments, and she never used arrogance as a shield for ignorance or insecurity. For that, I remember her with a special reverence. . .

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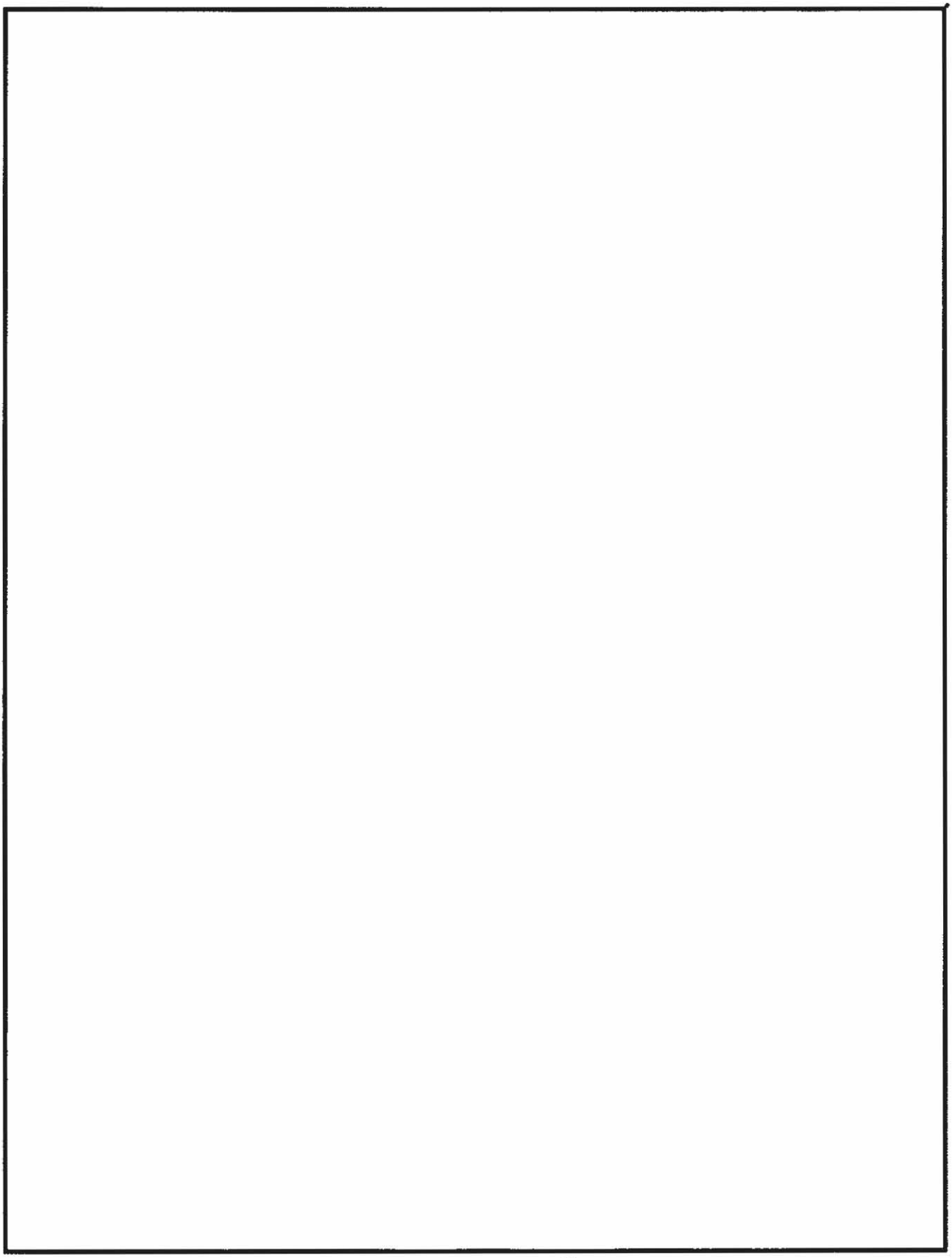

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Q&A:

A DIALOGUE BETWEEN MS. USER AND DR. ANALYSIS

[redacted] R51

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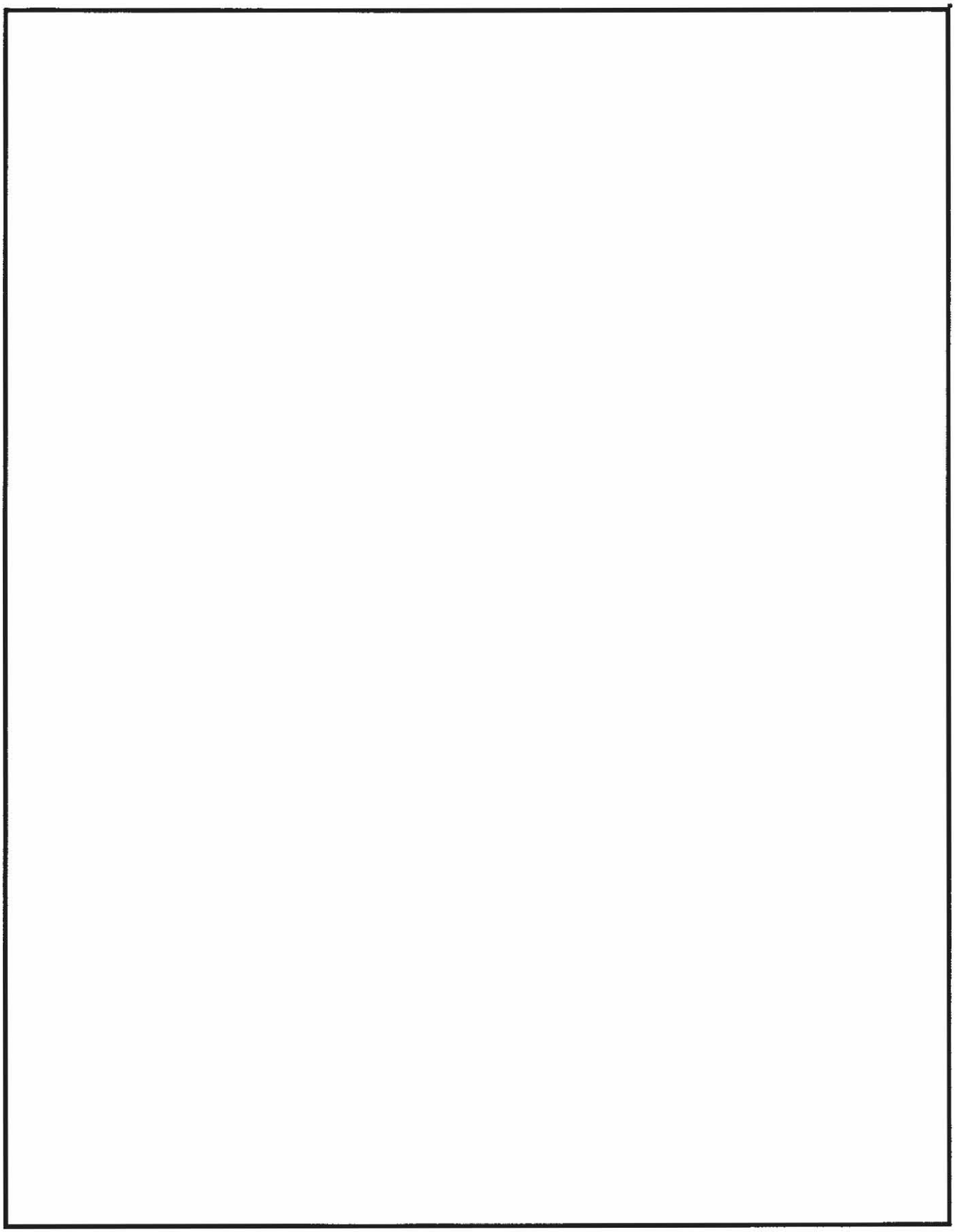

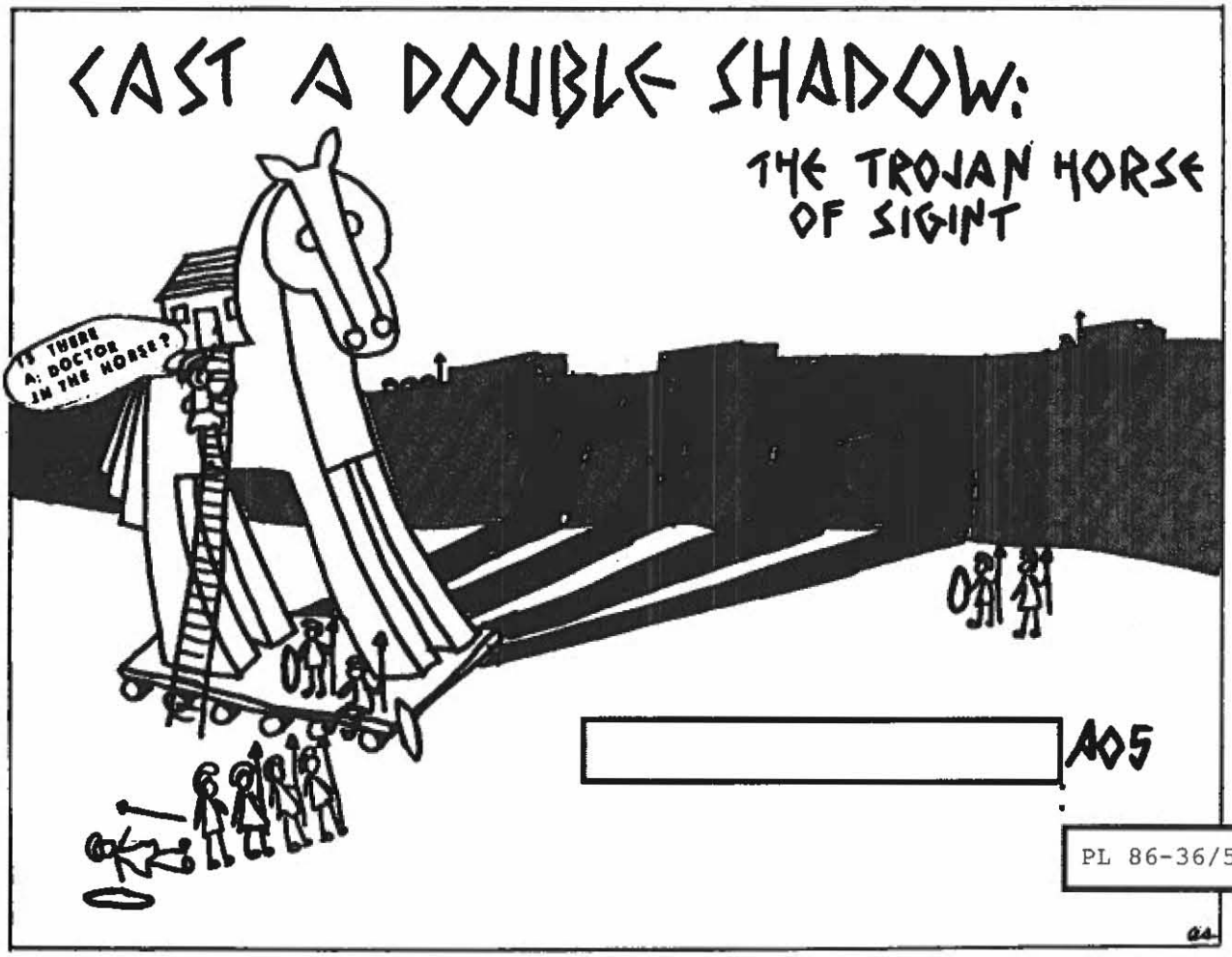

Among the leading attributes of COMINT, according to its past and present practitioners, are the dual qualities of timeliness and authenticity. SIGINT support to tactical military commanders is contingent on these two characteristics, while a wealth of combat and peacetime applications have borne out this unique dependency on the intelligence source known in the open literature as "intercepts." Only recently, in the works of Kahn, Winterbotham, and Brown, has the public been told the story of the central, critical role played both by COMINT and by radio strategems in World War II and in the Allied victory. In fact, so consummately has this story been told that it is now necessary to revise history in light of information only recently made available to scholars. Here we see journalists, and a former SSO, in the role of historical revisionists -- not a new role for journalists, but certainly a new role for SSOs, at least in the open literature.

Dependency on SIGINT's timeliness, authenticity, and -- oft-times -- uniqueness is unsettling. The quality of "believability" or creditability -- the much sought A1 source -- is fraught with potential disaster, as Brown's *Bodyguard of Lies* convincingly demonstrates, even to the most skeptical reader. Creditability is everywhere and at once a two-edged sword.

[redacted]

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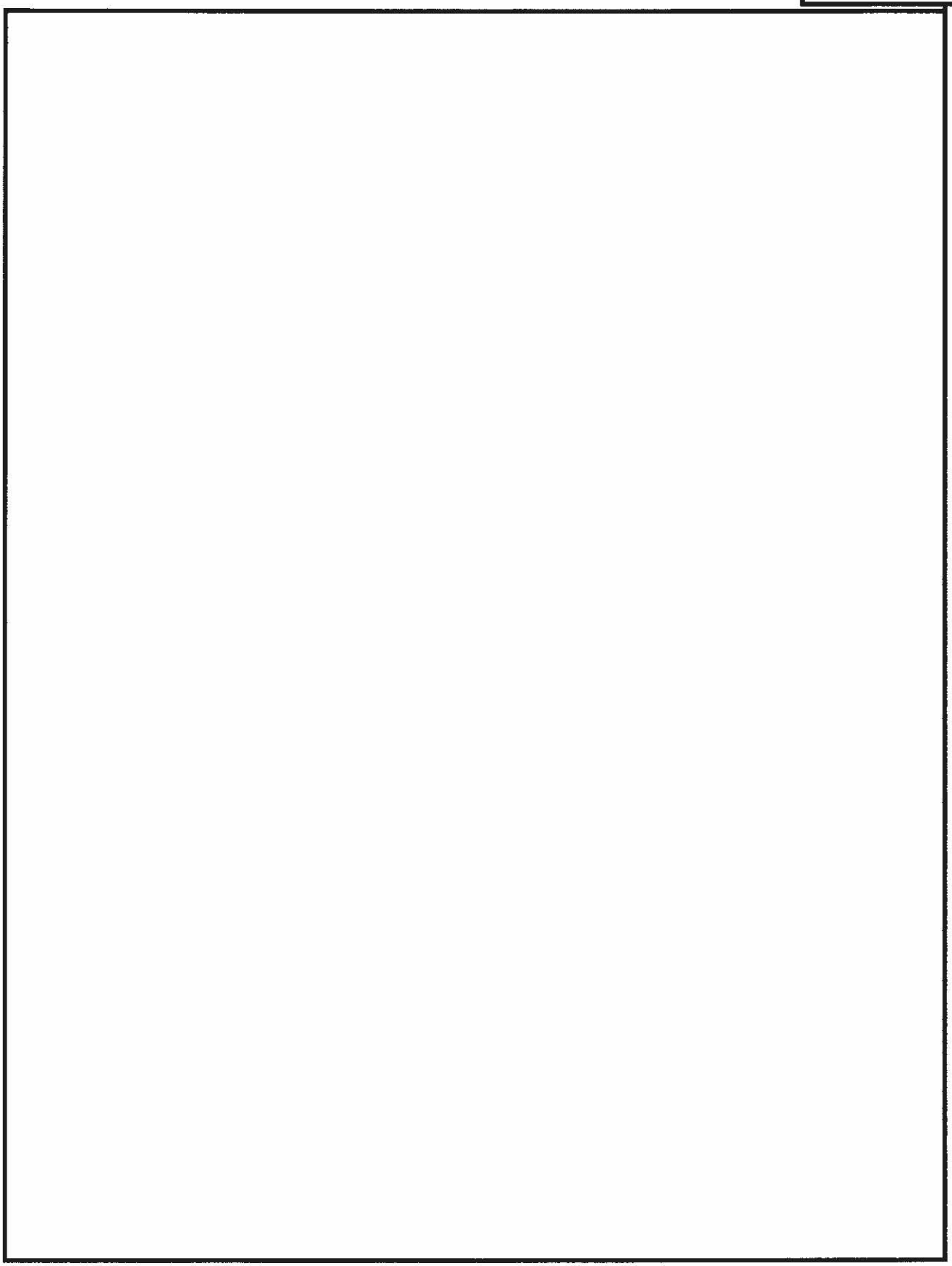

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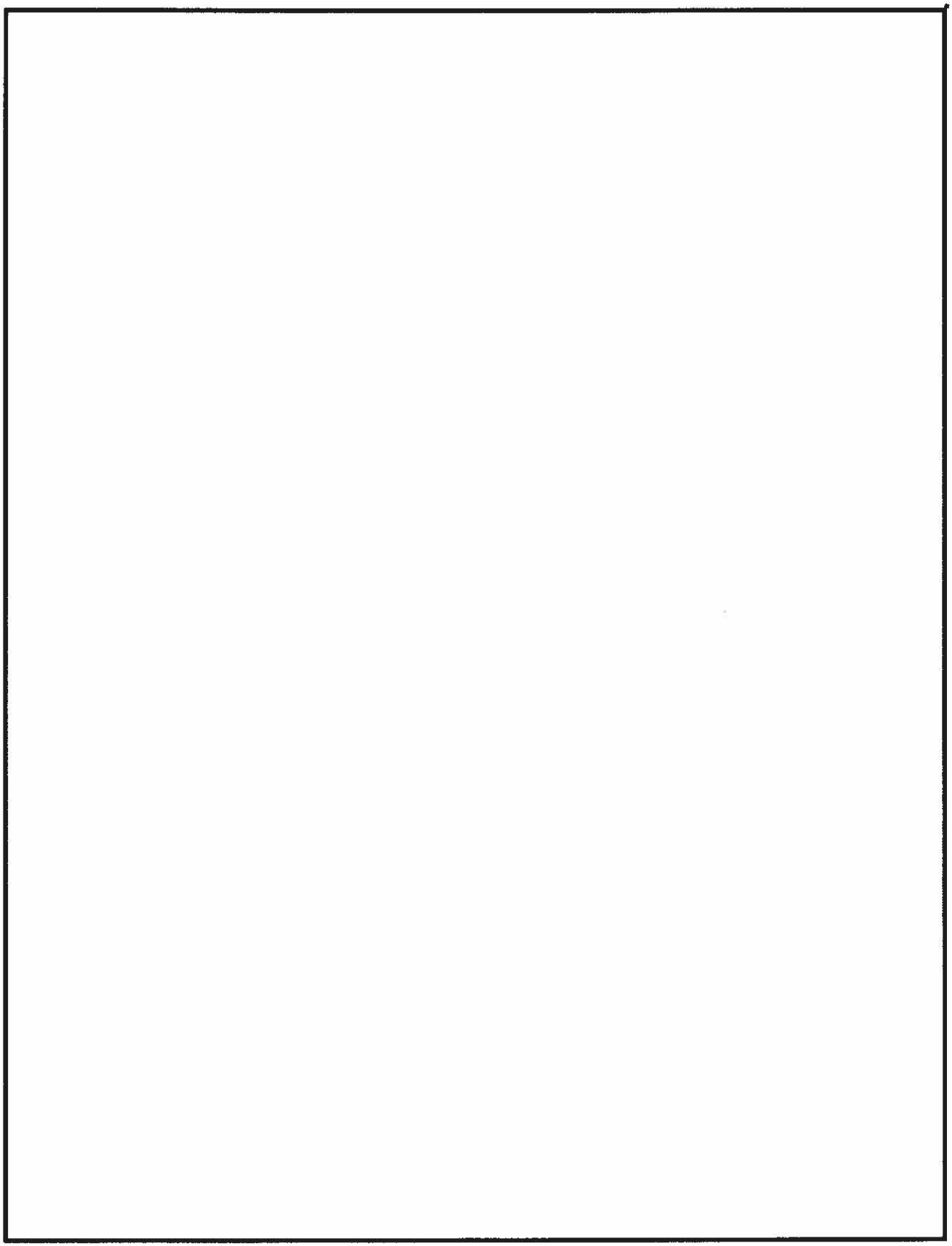

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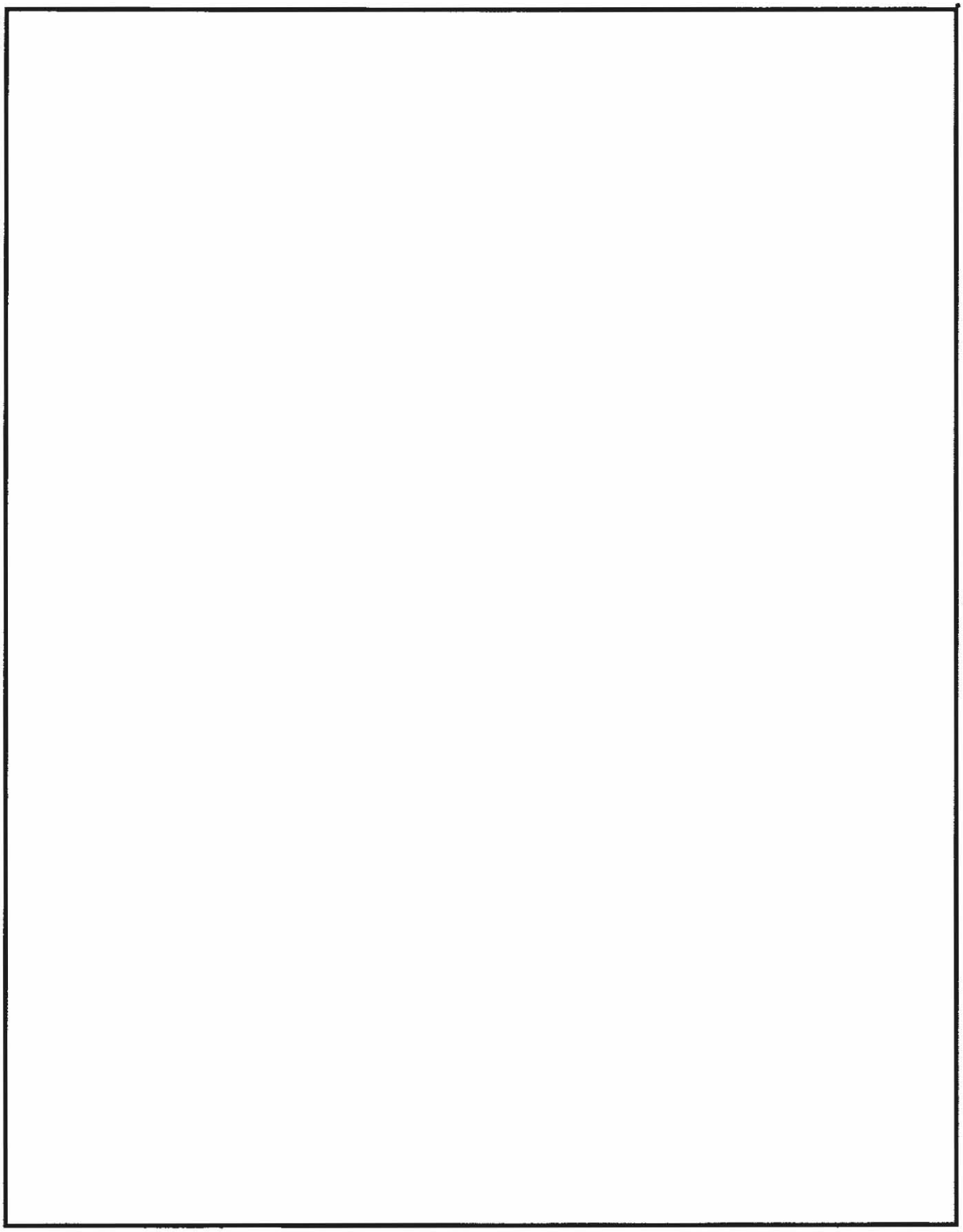

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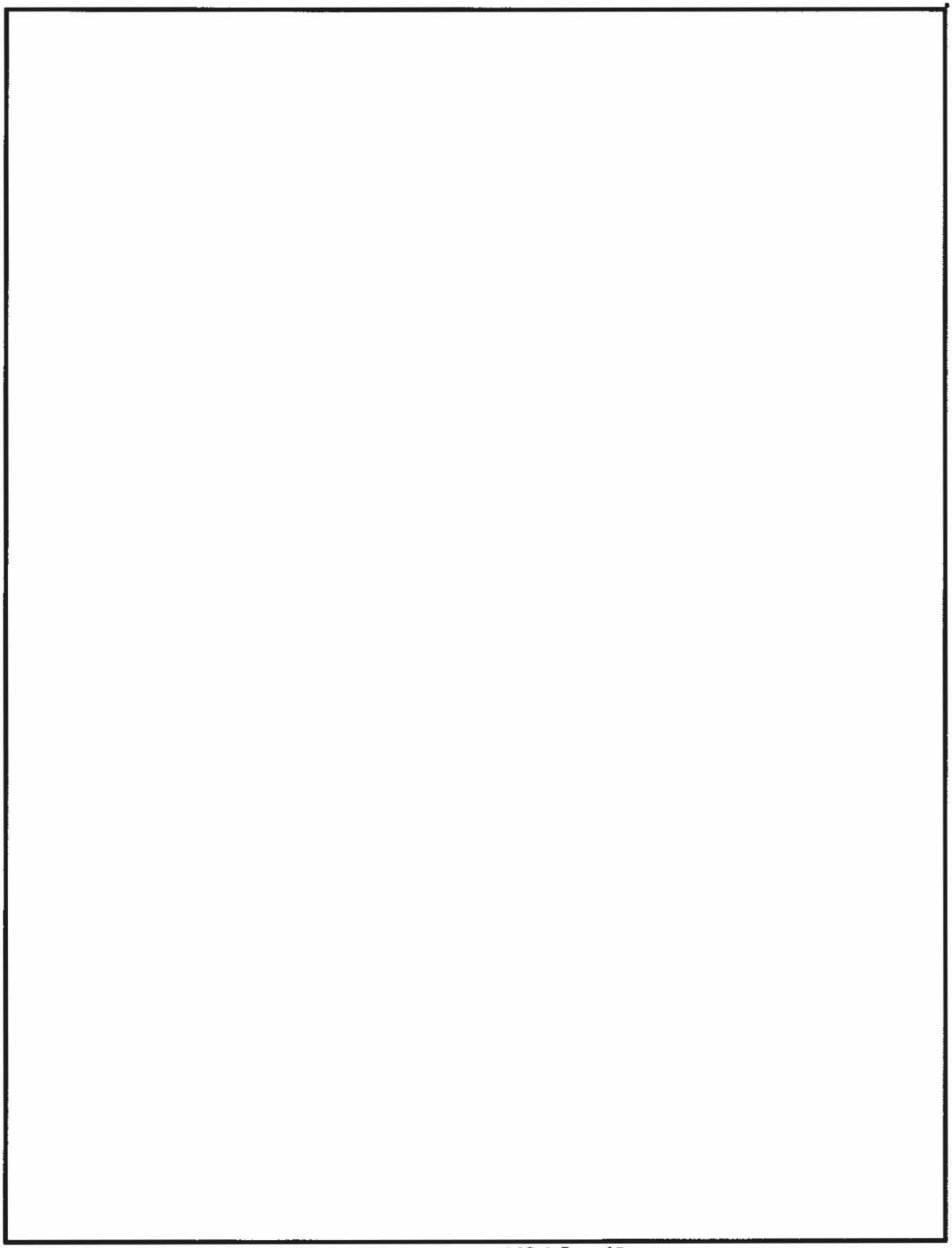

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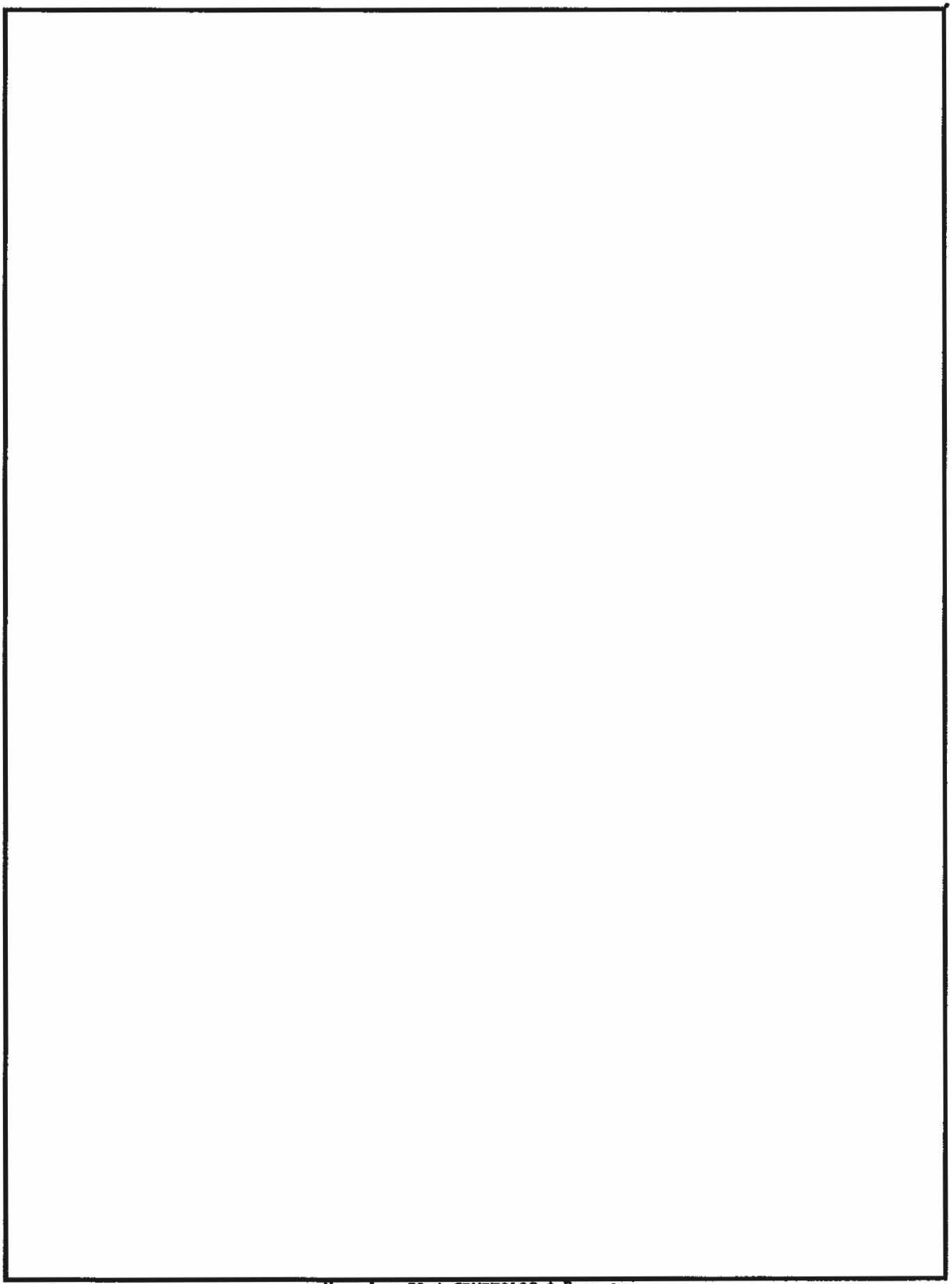

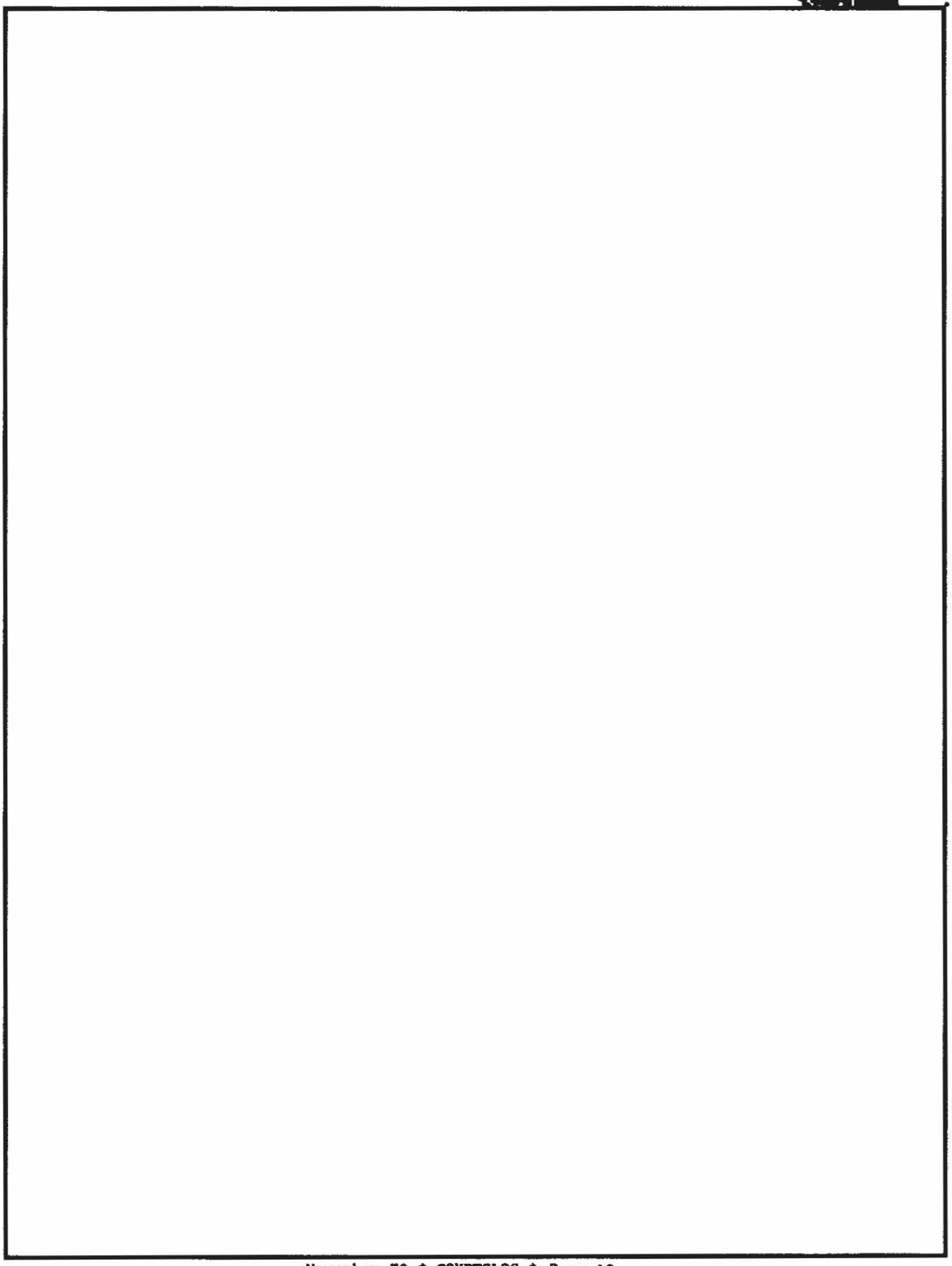

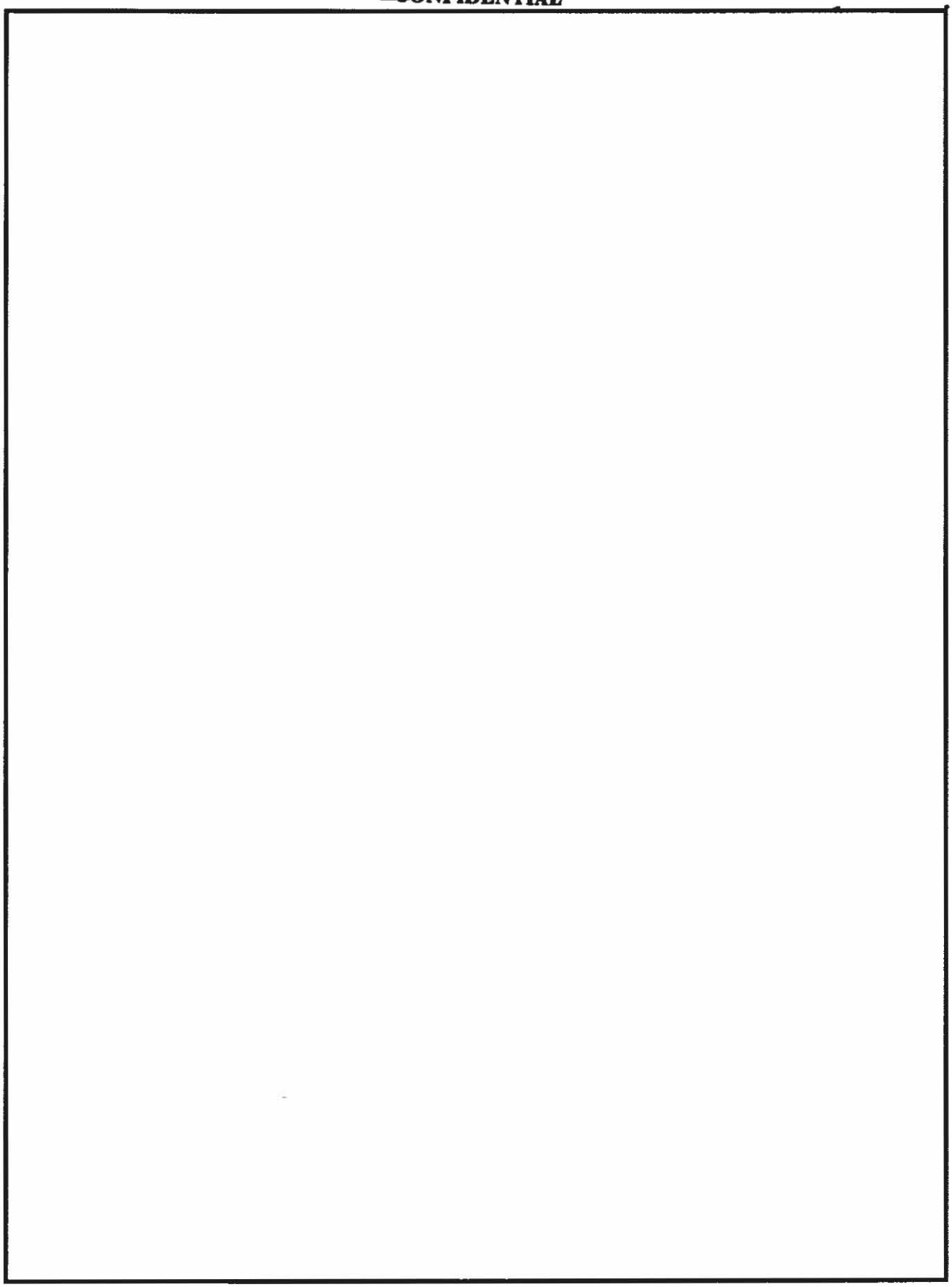

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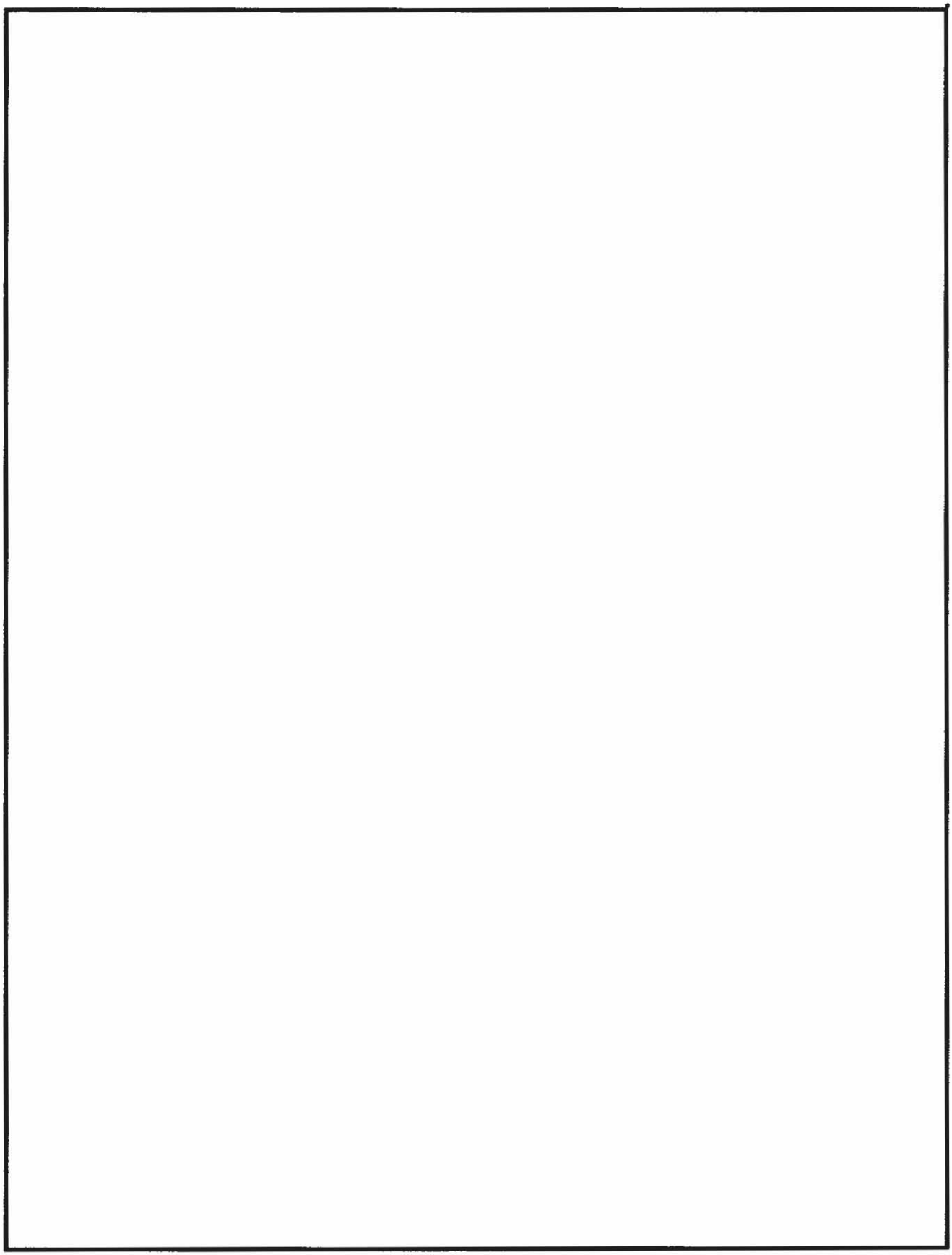
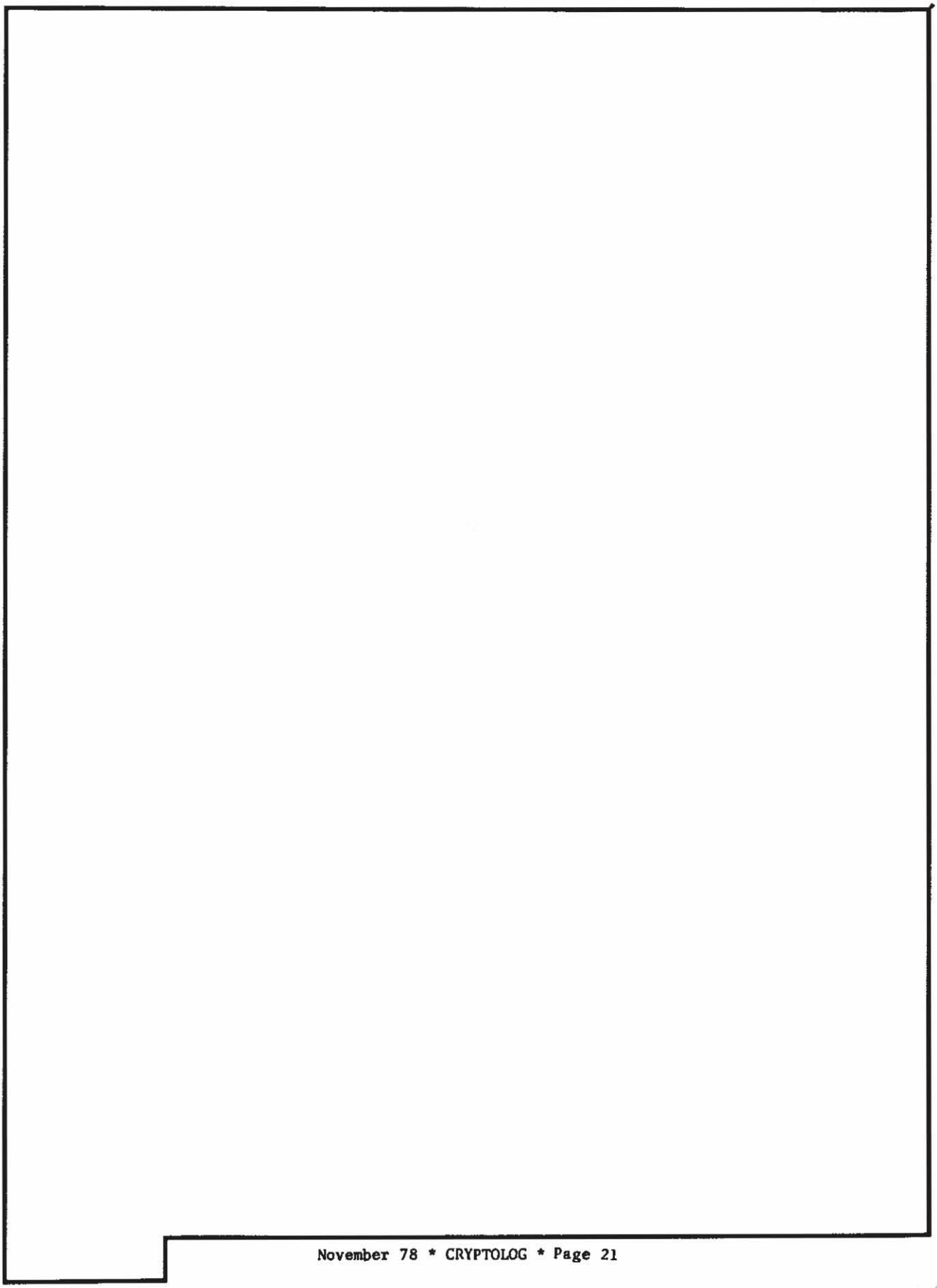
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