ITAR: An Exercise in Intelligence Without Wisdom

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ITAR: AN EXERCISE IN INTELLIGENCE WITHOUT WISDOM:

The hypothesis that the collection of secret data, far beyond the concomitant ability to analyze it, poses a serious potential for harm in that it colors political decisions with a false air of legitimacy and certainty, empowering error to ignore reason through the conceit of the possession of concealed but possibly meaningless facts, and, furthermore, the contention that it is an unconscionable disservice to the national security for the military to needlessly alienate itself from the society of intelligent citizens, thereby breeding a closed, insular, self-perpetuating system of smug inadequacy.

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I. BACKGROUND OF THE SITUATION AND OUTLINE OF THE ARGUMENT

Probably, in all societies of the past and present, it is true that when an issue perceived of as crucial to national security arises, those measures deemed necessary will take precedence over all other rules of civilized behavior. In this country individual rights, in particular those enumerated in the Bill of Rights, have usually bowed to the claim of national security. That is until the *claim* of national security is publicly discovered to actually be different from the *reality* of national security. On the front lines, during times of war, due process for deserters and traitors has typically meant taking careful aim. Sufficiently many marksmen on the firing line, has customarily been deemed sufficient to render the punishment neither cruel nor unusual. In the military, search and seizure is a battle tactic not a procedural delicacy. Even Equal Protection in matters of race is not sacrosanct. While the infamous *Korematsu*[1] has been vilified and repudiated by the Executive Branch it has not actually been overruled by the Court. Generally speaking, the Court's view of military exigencies is best summarized by the quote from *Bowles v. Willingham*, "National Security might not be able to afford the luxuries of litigation and the long delays which preliminary hearings traditionally have entailed."[2]

The instinct for societal preservation is natural and understandable but what distinguishes the United States as

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[1] *Korematsu v. United States,* 323 U.S. 214 (1940); see also *Hirabayashi v. United States*, 320 U.S. 81 (1943).

[2] 321 U.S. 503, 521 (1944).

a constitutional representative-republic is that it is equally important for us to preserve the character of our country not just its borders. If to preserve self-rule we would have to abandon the Constitution then the United States would be destroyed even if the remaining political entity remained autonomous.

The one area in which governmental action based on claims of national security has been tempered (even to the extent of voidance by the Court) is that of Freedom of Speech. Over the years, the Court has moved from the approach of *Schenk*[3] and *Debs*[4] to the more liberal *Yates*[5] and The Pentagon Papers Case[6]. As the world changes in unexpected ways it is now more legal to be a member of the Communist Party in the United States than it is in Russia. This is a point we shall revisit shortly. This does not mean that national security can never trump Free Speech, even when applied as a prior restraint, as seen from the thwarted attempt to publish the H-bomb secret in the magazine *Progressive*.[7] The law is still a bit confused as to how much weight to accord claims of national security. In the case of the ex-CIA man who wrote a tell-all book[8] which the agency sought to repress, the Court decided that even if allowing such publications did, in the aggregate, compromise national security the only basis they were willing to find for restraining publication was that the author had previously signed a contract not to write such a book. Whether there is a national security exception to Free Speech and when does it apply, is unsettled. Many cases cite such an absolute exception but others, such as *United States v. Robel* deny it exists.[9]

What we consider in this paper is a new matter: An act of Congress known as the Arms Export Control Act of

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[3]*Schenk v. United States*, 249 U.S. 47 (1919).

[4]*Debs v. United States*, 249 U.S. 211 (1919).

[5]*Yates v. United States*, 354 U.S. 298 (1957).

[6]*New York Times Co. v. United States,* 403 U.S. 713 (1971).

[7]*United States v. Progressive*, Inc., 467 F.Supp. 990 (W.D.Wis 1979).

[8]*Snepp v. United States,* 444 U.S. 507 (1980).

[9]389 U.S. 258, 262 (1967).

1976 ("AECA")[10] which authorizes the President to control the export of defense-related articles and services. This has been implemented by the Department of State in a document called the International Traffic in Arms Regulations[11] which is referred to as ITAR. While it is easily conceded that it is certainly a good thing to keep weapons of destruction out of the hands of our enemies, computer encryption schemes and other related manifestly "pure" mathematics fall under the State Department's self-delineated jurisdiction. Since we do not want foreigners to have conversations which, if intercepted, we cannot decipher, the intent of this section of ITAR is to keep household-variety electronic devices, manufactured in the United States, which include encryption capabilities, from being sold by Americans to foreigners. There is no requirement that the encryption schemes involved be new or in any way unknown to the world at large. The item being controlled may be identical to one already available elsewhere, yet the American manufacturer must obtain a license to dispense it himself.

However, more than just governing machinery, ITAR seems in practice to keep certain mathematical talks from being given and certain mathematical papers from being published.[12] This latter aspect stems from the definition of "defense services" to include "[t]he furnishing to foreign persons of any technical data controlled [by ITAR] ... whether in the U.S. or abroad."[13] The exporting of the delineated articles or services requires a license or written approval from an entity called the Office of Defense Trade Controls.[14] Even where mere speech is involved the speaker must inquire beforehand whether she is required to obtain a license called a Commodity Jurisdiction Request.[15] The would-be scientific speaker must seek advanced approval from the

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[10]22 U.S.C. 2778 et. seq., including 22 U.S.C. 2780.

[11]22 C.F.R. in particular Sec. 121 et seq. at 383.

[12]A contention current in the litigation *Bernstein v. United States Dept. of State, et. al.* filed in N.D.Cal 1995.

[13]ITAR 120.9(2).

[14]ITAR 127.1(a)(1).

[15]ITAR 120.4.

State Department for each of her expected listeners.[16] Since this regulation applies to all domestic speech involving foreigners as well as extraterritorial communication, it can govern what may and what may not be taught to foreign students in American universities.

Let us note at the outset that, unlike the H-bomb, the desire for encryption capability is not prima facie evidence of an evil heart, nor is the precise algorithmic methodology for performing encryption any sort of secret. A complete catalogue of details for many effective encryption algorithms has already appeared in international journals, textbooks, conference proceedings, etc. So although ITAR does not draw an express distinction between the different natures of the armaments it wishes to regulate, nor does it distinguish between the methodologies and motivations for its various restrictions, it is clear that what is *probably* intended by ITAR is not to make cryptology something impossible for foreigners to do, but simply to slow down their inevitable progress in this area for an undeterminable but surely brief period of time. Cryptology itself, as we shall allude to again, is hardly a purely American invention in the first place. As applied to the subject matter we consider here, this regulation bespeaks of a monkey-wrench mentality which we shall claim does more harm to America than good. This may happen in the following three ways:

(1) by having a chilling effect on American scientific research,

(a) by creating unnecessary, dysfunctional, and unresolvable doubt in the minds of certain Computer Scientists as to whether their work is in violation of government regulation, possibly entailing criminal liability,

(b) by hampering American participation in international conferences and publication in internationally distributed journals,

and

(c) by interfering with the educational system, as it has now developed, with its indiscriminate intermingling of foreign visiting professors and foreign graduate students with their American counterparts,

(2) by inviting retaliatory scientific protectionism, such as the non-dissemination of foreign discoveries to American scientists by order of foreign governments, which would clearly handicap our ability to maintain state-

[16] ITAR 123.9

of-the art research, which in turn is potentially detrimental to national security interests,

and

(3) by alienating the military from a large and valuable segment of American society consisting of decent intelligent people through

(a) their manifest wholesale disregard for human rights,

(b) the presumptuousness of their ability to evaluate the potential harmful applications of pure science,

(c) their disregard for the established customs of, and the method of conducting business in, the field of international world-based research,

and

(d) their desperate pursuit of a feeble, doomed, and morally questionable professed goal.

There are due process, free speech and freedom of association toes being trod on by ITAR at every step of its implementation, and challenges to its constitutionality are already in progress[17]. What scrutiny would ITAR pass? Not only isn't ITAR, in practice, the least restrictive method of achieving an urgent, compelling, and critical national goal; it isn't even rationally related to promoting any national interest, since it creates a local and international backlash of animosity and scorn greater than the most optimistic projections of security benefits that it might provide. Again, in summary: it won't work, it will make good foreigners hate us, it will make good Americans hate the military, and it smells bad.

II. THE RATIONALE BENEATH ITAR -- AND ITAR BENEATH THE RATIONAL

It has long been noted that there is an inherent policy conflict between, on the one hand, the attempt to restrain the flow of our home-grown technology to our adversaries (which, by the way also means restricting the flow to our friends as well, since, God knows, they cannot be trusted where a profit is possible), and on the other hand, the compelling policies of protecting free speech, encouraging exports to rectify the disastrous balance

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[17] *Cf. Bernstein supra.*

of payments deficit, and, altruistically, as the Constitution says, "[t]o promote the Progress of Science and the useful Arts...."[18] That this is an unhappy conflict has been noticed for some time.

One of the characteristics of science at the turn of the twenty-first century, is its international nature and its dependence on open communication. Science, especially Computer Science, develops in a profusion of group settings: journals, e-mail, conferences, etc. To attempt to stem the flow of information of even one abstruse branch of Computer Science is a very ambitious project, much less to attempt to curb the spread of a commercially profitable aspect, yet this overreaching it is being undertaken. Why?

In 1976 it was decided that our slim lead in military superiority over the Soviet Union was maintained exclusively by our delicate "lead-time" in technological discovery. This enabled us to keep one step ahead of them in the rapid development of new high-tech weapons, based on our ability to reliably produce a never-ending and ever-speedy string of important discoveries. It was vital for the security of our nation to establish a Military Critical Technologies List (MCTL) and to keep these special discoveries out of international circulation -- at least until they had been superseded by the inevitable next generation of gizmos. The terms of curtailment were laid out in what was called the Bucy Report[19]. The original goals were modest but required University cooperation in the oversight of in-house scientific research. At that period in American history, such cooperation was unthinkable. This in turn led to the United States Munitions List as authorized by the AECA[20] which allowed the Secretary of State to review any export license application for control of wandering technology.[21] Further legislation, and, of course, further lists, ensued culminating in the ITAR under discussion here.

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[18]Article I, Section 8.

[19]Defense Science Board Task Force on Export of U.S. Technology, An Analysis of Export Control of U.S. Technology -- A DOD Perspective (1976). Cited in Fogleman, V. M. and J. E. Viator, The Critical Technologies Approach: Controlling Scientific Communication for the National Security, 4 B. Y. U. J. of Public Law 293 (1989) at 298.

[20]22 U.S.C. Sec. 2751 (1982).

[21]50 U.S.C. app. Sec. 2405(a)(5)(Supp. V 1987).

It can be (and has been) claimed that ITAR will be considered a great success if it succeeds in retarding, even if not in preventing, the spread of technology to our adversaries. This would be completely consistent with the spirit of the original Bucy Report: however, the underlying parameters of society have changed somewhat since the date on that report. We are at the moment enjoying quite a comfortable lead in technology over the Soviet Union since we manage to still be in existence. The idea that we must retard their technological development has given way to the question of where we are to find the 20 billion dollars they want to borrow from us to feed their starving population. The goal of retarding Soviet technology, at this point, hardly seems worth the trouble of impinging on any rights of any American citizens.

The National Academy of Sciences, with support from the Defense Department issued a report in 1982[22] which expressly describes the need for open communications in the development of contemporary Science. This report worries that constraints on international communication will *degrade* the position of the United States in science and technology, with "harmful economic effects". Moreover, because national security requires economic strength, this policy which was intended to increase national security might actually have the opposite effect for both scientific and economic reasons[23]. This observation was echoed in a report issued by the National Science Board in 1988[24]. A further report of the NAS in 1987, chaired by the then director of the NSA, Gen. Allen, advised that controls should be imposed sparingly since they have a "chilling effect" on research and development.[25] Now, to a Constitutional Law Professor, it is clear that a chilling effect on research is not exactly the same as a chilling effect on speech, since there is no guarantee that a researcher will make a discovery, nor wish to communicate it if she does. However, there is the clear implication here that the chilling effect is on the national interest at large, which, even if this isn't First Amendment verbiage, undermines the

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[22]National Academy of Sciences, Scientific Communication and National Security 24-25 (1982).

[23]NAS report *supra* at 42-45 cited in *Shinn* ~~supra~~ infra at n. 25

[24]National Science Board, Report of the Committee on Openness of Scientific Communication (1988).

[25]National Academy of Sciences, Balancing the National Interest (1987) at 21. Cited in Shinn, A. M., The First Amendment and the Export Laws: Free Speech on Scientific and Technical Matters, 58 Geo. L. J. 368.

potential for rights-restricting regulations to pass judicial scrutiny, since they are counter-productive of their professed legitimate goal.

As was pointed out by Allen Shinn, Jr.[26] these export controls originate in the mentality of V.J. Day. It was a time when we enjoyed a hegemony on world technology (Colossus aside). But how did we get this way? It was by no means a by-product of Congressional Legislation or Military Training. It was a direct consequence of democracy that we had become the safe haven for European scientists fleeing totalitarianism. And it was a consequence of our uniquely prosperous economy that encouraged the so-called post-war brain-drain of European intellectuals and scientists to our shores. The percentage of our technology which came from these "new Americans" seems to strike no current policy-maker as significant. These scientists are here now and their discoveries belong to us, and to the discretion of Congress and the Military to regulate. However, times have changed. There are centers of technology and wealth as impressive as ours beyond our borders, and beyond the power of our legislation and regulation. We suffer not only technological competition from Japan and Western Europe but economic competition as well. What is even more significant is that history has taught us that science, or at least scientists, flow towards freedom. And not only are we no longer unique in this respect but regulations such as ITAR can clearly put us in an inferior bargaining position when it comes to inducing American-trained scientists and engineers to remain in this country, instead of returning to their native lands. Worst of all the aspects of the balance of trade deficit is the fact that the sub-category of high-technology trade slipped into deficit in 1986.[27] We already buy more high-tech than we sell.

In the original NAS report the idea that keeping scientific secrets could be justified by achieving the result of depriving our enemies of valuable technology, was a delicate balance dependent on four conditions:

(1) that the technology develops so rapidly that the time from basic science to application is short

(2) that the technology has identifiable military applications

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[26] *Id.* at .

[27] National Science Board, Science & Engineering Indicators -- 1987 at 15, 133-35 (1987) cited in Shinn *supra.*

(3) that the transfer of the technology would give the U.S.S.R. a significant near-term military advantage and

(4) that the United States is the only source of information about the technology in question.

As for the encryption governed by ITAR, all four points are negated, mooted or dubious.

III. THE QUESTION OF CONSTITUTIONALITY

That the First Amendment applies to scientific speech is fundamental.[28] If the scientific speech is incorporated in a commercial product it may arguably be considered a form of commercial speech, which is routinely accorded considerably less freedom from restraint. However ITAR lumps the commercial product incorporating the technology along with such non-commercial speech activities as the giving of international addresses, the publishing of articles in technical journals read by foreigners, and the dissemination of free software itself, thus removing the commercial-speech defense from ITAR supporters.

A First Amendment case can be made against ITAR on several grounds.

(1) Since the restrictions are administered through licensing procedures they constitute the worst form of arbitrary prior restraint of the type almost never held constitutional absent the possibility of some judicial review,[29] which recourse ITAR does not include. The Court has held definitively that no forum except a court can be permitted to impose a valid final restraint on expression.[30] When a license is denied a court review must

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[28]See e.g. *FCC v. Pacifica Found.*, 438 U.S. 726, 746 (1978) to the effect that speech is more likely to be protected if it has "literary, political, or scientific value." This phrase of deference to scientific speech recurs consistently through all obscenity and pornography cases.

[29]See Redish, The Proper Role of the Prior Restraint Doctrine in First Amendment Theory, 70 Va. L. Rev 53 (1984).

[30]From *Freedman v. Maryland*, 380 U.S. 51, 58 (1965). See also Tribe L., American Constitutional Law, The Foundation Press (1978) at 732.

be available, prompt and adversarial[31]. Even with judicial review the scrutiny will be harsh. In the words of *The New York Times v. United States*, "Any system of prior restraints of expression comes to Court bearing a heavy presumption against its constitutional validity." The government's rationale in that case, as all will remember, was based on considerations of "national security" at a time of a war with heavy American casualties, concerning a speech that was directly related to sensitive secrets about that war. And the government still lost. Basically because it is a tenet of our democracy that the more important a decision is, the less justifiable it becomes to disenfranchise the public from the policy-making process by depriving them of vital information. The claim that some information is so important for national security that it must be kept from the public is inherently oxymoronic. The public has a right to know. The public must be constantly re-evaluating its decision-makers and decision-making methodologies lest not-virtuous men and factions perpetuate miscalculations and transgressions behind a cloak of paternalistic secrecy.

Prior restraint through licensing can also give rise to a Fifth Amendment case based on lack of Due Process in governmental taking.[32]

(2) Since all telecommunications, even those without the remotest possibility of national security interest (if the NSA would concede there are any such) are typically transmitted in a compressed form, they may all be deemed encrypted, and those involving decoding keys may be deemed ITAR-controlled. Therefore this regulation is vague and/or overbroad. This is in particular a sharp criticism, since the fact that some scientific discoveries are deemed military secrets *should* imply that the rest (especially those already in print in international journals and textbooks) are not. Also the principle of law is that all restrictions on speech must be "narrowly tailored" to studiously avoid superfluous infringement, which ITAR makes no attempt to do. In the much-quoted language of *Buckley v. Valeo*, restrictions on speech must be "closely drawn to avoid

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[31] *Bernstein supra* demonstrates that such is in fact far from the case with ITAR.

[32] *Goldberg v. Kelly,* 397 U.S. 254, n. 139 (1970).

unnecessary abridgment."[33] Overbreadth is a severe challenge to regulations of this sort. *Robel, supra*, holds that there is no "national security exception" to the overbreadth doctrine[34] even when appeal is made to the war power of Congress.

(3) Since it is trivial for foreigners to implement the restricted technology from universally available completely detailed algorithms there is no hope that this regulation will achieve the goal stated in its Congressional source, the AECA, which is to *deprive* our enemies of sensitive technology, not merely make them shop elsewhere.

And,

(4) We are not at war, not even a cold war, anymore. This is significant since, as stated in *Near v. Minnesota*, "When a nation is at war many things that might be said in time of peace are such a hindrance to its effort that their utterance will not be endured."[35] The flip side to this coin is that when the danger is less clear and less present than ever before, the permissibility of creating new impositions on speech diminishes accordingly.

The government itself has already worried about the constitutionality of ITAR. In a memorandum to Dr. Frank Press, Science Advisor to the President, the Justice Department warned that in order to use ITAR to restrict unclassified cryptographic research, it would need both more precise standards for granting or withholding a license, and a provision for prompt judicial review of a State Department decision refusing such a license[36]. There is evidence now that such careful tailoring has never been preformed on ITAR and its administration is typified by *officious overreaching*, insensitivity to freedom of speech, and general governmental neglect whether

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[33] *Buckley v. Valeo,* 424 U.S. 1, 25 (1976).

[34] *United States v. Robel*, 389 U.S. 258, 262 (1967).

[35] *Near v. Minnesota ex rel. Olson*, 283 U.S. 697, 716 (1931).

[36] Department of Justice, Constitutionality Under the First Amendment of ITAR Restrictions on Public Cryptography 4 n. 7, reprinted in The Government's Classification of Private Ideas: Hearings Before a Subcomm. of the House Comm. on Gov't Operations, 96th Cong., 2d Sess. 268 (1980). Cited in *Shinn supra* n. 62.

benign or malignant.[37]

All of these points, once made, are really not the most compelling First Amendment case against ITAR. It is clear that ITAR as it stands and as it is administered is seriously flawed in the ways mentioned, yet even if each and every one of these complaints were to be corrected (except for the fact that we are not in a state of war) ITAR would still, of necessity, be an infringement on First Amendment rights. The invasiveness of ITAR is inherently incapable of being cured. Hypothesizing a future amended ITAR, narrowly tailored to apply only to true encryption with direct intentional military application embedded into a mechanical device with destructive potential, and an administrative agency which makes its reviews intelligently, swiftly responds to queries from programmers, and affords direct immediate access to courts of appeal; this would still, of necessity, infringe on the freedom of scientific speech by the exercise of The Big Chill.

It would still be the case that any programmer writing any encryption routine, would not be able to discern from the inherent nature of her project at hand, whether she is about to feel the full force of the United States military come down on her head. In the case of all but the most divorced from reality (only about 50% of them), this would act as a distraction and impediment, if not a total dissuasion from continuing research.[38] If there is one thing that disquiets scientists even more than peer review, it is the prospect of ever requiring representation by counsel. Computer scientists don't want to have to ask permission from lawyers or soldiers or politicians as to whether they can factor a large number. These are often not completely socially integrated individuals in the first place, and how they will react to such regulation is uncertain, but it will clearly not promote their efficiency -- the efficiency that Bucy is relying on to preserve our competitive edge and national security.

Shall we say that a programmer writing encryption algorithms has assumed an obvious risk of governmental

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[37] *Bernstein supra.*

[38] This claim is expressly made in *Bernstein supra.* He is a graduate student and programmer who has stopped working completely, allegedly because of the difficulties and insecurities thrown at him by ITAR enforcement.

scrutiny, and so deserves no First Amendment sympathy? Has he voluntarily assumed the stance of some kind of limited public figure for the purpose of invading his rights? Those who may believe this exhibit a certain naivete about what actually constitutes this allegedly dangerous branch of science. The mathematics behind most encryption is remarkably elementary, and that which does manage to reach the graduate-student level (the rare examples of elliptic curves and Algebraic Number Theory, for instance) is remarkably pure, i.e., as abstractly divorced from real world situations as any ecclesiastical speculation concerning dancing angels. Yet, via ITAR, an eleven-year-old playing with Prime Number Theory could inadvertently become a top security risk. H-bomb construction is unlikely to be the by-product of a child's play with number puzzles found in the back of a magazine; however, cryptography is so intertwined with the most accessible of all elementary mathematical topics that any new wrinkle, no mater how rudimentary, might justifiably qualify as ITAR-engulfed.

The technical subject matter covered by ITAR Includes, "Information Security Systems and equipment, cryptographic devices, software, and components specifically designed or modified therefor...."[39] According to the language, in order to require licensing, certain components of a security system must have been specifically designed for encryption purposes. However, for software to fall under this clause it is not an express requirement that it have been originally intended for encryption, merely that it be software that is useable for this purpose. How can one tell what software is definitely not incorporateable in a larger system for this purpose? Sometimes the least likely of algorithms, such as one for packing suitcases to evenly divide the total weight of the contents, are potential encryption devices.[40]

The unavoidable conclusion is that by digging into the mathematics behind the technology as deeply as ITAR intends to, it must of necessity scrutinize, invade, and thereby chill a vast section of pure research. Naturally there will be those mathematicians who don't realize this, but that situation will change abruptly once a thesis defense in a major university gets interrupted by the ITAR thought-police.

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[39]ITAR, 22 C.F.R. Ch I, Sec. 121.1(a)Category XIII(b) (4-1-94 Edition).

[40]We refer here to the so-called knapsack codes.

The irony of this situation is poignant to those familiar with the little note written by the preeminent British mathematician of the first half of this century, G. H. Hardy, who, in a pamphlet entitled A Mathematician's Apology explained why he was unrepentant about having devoted his life to Prime Number Theory, the subject he confidently characterized as having no conceivable practical application to the real world whatsoever. Had Hardy thought his work would today fall under the rubric of cryptography and hence be military research, and thereby be potentially censurable, he would be more than chilled, he would be frigid.

There are a myriad of other related chilling effects. How are scientific conferences to police the presentations to, conversations with, or even the attendance of, foreign nationals? Are foreign graduate students to be offered an attenuated education, especially in classes in Number Theory? Fermat's Little Theorem and the Euler totient function, which serve as the basis of many cryptological systems[41] are routinely taught to high school students. Are these students to be forbidden to travel abroad without express security-police permission? What about the complication that Euler was not actually an American citizen, but a subject of the Czarina Catherine, and that Fermat had the effrontery to die while America was still a British colony? What can be done about the fact that S of the celebrated RSA encryption algorithm is not even an American citizen today[42] and is free to blab all this militarily important sensitive material to any country that invites him to speak? And he does! The foreign student problem still worries many in high places. In December 1986 SUNY Buffalo was subpoenaed by the FBI to provide information on library searches performed by foreign students.[43] There have already been examples of scientific conferences held in the United States with the attendance of foreign nationals, that were severely disrupted by the rumor that the DOD, citing ITAR, was going to withdraw support from any presenter who, knowingly or not, violated export control laws by giving papers that had not been cleared. Adding to the unsettling confusion was the fact that the DOD representatives at the conference did

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[41]Cf. Diffie and Hellman.

[42]Shamir is in fact Israeli.

[43]Cited in *Fogleman supra* at 386.

not have the authority to clear papers for presentation.[44]

But even if we concede that ITAR does have a chilling effect on scientific speech that would normally render it unconstitutional in a purely domestic setting, there is the further complication that freedom of speech does not always mean freedom to speak abroad, or even to get abroad for that matter. The Court has been more willing to extend the powers of the Executive beyond our national borders than to extend the Bill of Rights to international matters. This is constitutionally based on the observation that the Executive alone that has the assignment of dealing with other nations. Of course, that is the Executive in its relationship to the Judicial and Legislative. The complete list of the rights of the people are expressly not delineated in the Constitution since that document creates institutions not humanity. The rights of the people are only mentioned in passing in order to guarantee that the institutions created would be the devoted servant of the people and not act to harm them. The idea that it would have to be explicitly stated in the Constitution that Benjamin Franklin could not be prevented by the President from describing his inventions to a visitor from France would seem ludicrous to the Founding Fathers.

The Court has often upheld the Executive against First Amendment challenges in international contexts, stating that, even in peacetime, in matters relating to the conduct of foreign policy, the political branches of government are largely immune from judicial inquiry.[45] The rationale is both constitutional and in part a self-realization that the Court is ill-equipped to second judge matters of national security.[46] However, when the repercussions of such foreign-policy-motivated restrictions are imposed at home, the Court has been quite willing to investigate

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[44]This is the so-called San Diego incident of the Society of Photo-Optical Instrumentation Engineers. See discussion in Ramirez, M. C., The Balance of Interests Between National Security Controls and First-Amendment Interests in Academic Freedom, 13 J.C. & U.L. 179, 185 (1986).

[45]*Haig v. Agee*, 453 U.S. 280, paraphrasing 292 (1981).

[46]*United States v. Curtiss-Wright Export Corp.*, 299 U.S. 304 (1936). Also see *Hayden v. Nat'l Security Agency*, 608 F.2d 1381 (D.C.Cir. 1979).

whether national security is really at stake, as in *Youngstown*[47].

Three levels of Presidential authority are recognized here: when he acts with the authorization of Congress, when he acts without the authorization of Congress, and when he acts against implied Congressional will.[48] The judicial deference to Executive action diminishes with each successive category. Because Congress has twice rejected licensing schemes like ITAR, this situation falls clearly into the third class, possibly tipping the scale against the Executive.

But it will not be our sole concern to second guess whether the Court will uphold ITAR. That ITAR has First Amendment problems is self-evident, and that the greatest of these goes under the rubric of chilling effect on speech, has been duly noted, yet the gravamen of our qualms with this regulation has not yet been addressed. It is our position that far from being a method of ensuring national security, ITAR is an unwitting tool for undermining exactly what it is that makes this country strong, i.e., freedom. Furthermore, it presents a danger of weakening American technological progress and hence poses a threat to the very national security it was reputedly designed to enhance. It makes the nation less secure and it makes the nation less free.

IV. THE QUESTIONABLE VALUE OF SO-CALLED INTELLIGENCE

Clearly if ITAR can retard the use of encryption outside the United States we will have a larger window of opportunity in which to read other people's mail. Let us for the moment ask a heretical question -- not whether this is something gentlemen should do[49] -- but is it something that has ever truly served us well.

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[47] *Youngstown Sheet & Tube Co. v. Sawyer*, 343 U.S. 579 (1952). Also *Yoshida Int'l, Inc. v. United States*, 378 F.Supp. 1155 (Cust.Ct. 1974), rev'd 526 F.2d 560 (C.C.P.A. 1975).

[48] *Youngstown* at 635. See the analysis in Pierce, K. J., Public Cryptography, Arms Export Controls, and the First Amendment: A Need for Legislation, 17 Cornell Int'l L.J. 197 (1984).

[49] An allusion to the famous quote by Henry L. Stimson, in 1929 F.D.R.'s Secretary of State.

Unquestionably the two largest espionage data-bases ever established in the history of humankind have been the Soviet Union's file on us and our file on them. These files were obtained and maintained at great sacrifices in human life, economic resources and demoted priorities for social programs and medical research. In other words, it is impossible to evaluate the total cost of having amassed these files. Perhaps if these resources had been redirected to cancer research millions who will die of this disease within the next twenty years would have been saved. It is impossible to tell. But one thing that is possible to determine conclusively is that, for all the data in both these banks, none of the really important inferences were drawn by either side. The data banks though monstrously costly were outrageously worthless.

We are uniquely situated at a moment of history to evaluate what is generally presumed to be un-evaluateable. Without the need for further historical perspective we can see clearly that all of the foreshadows of the most momentous events of the past decade were totally lost in the morass of accumulated "intelligence" details. Up until fifteen seconds before the Soviet Union vanished from the face of the Earth, the fact of its imminent demise was undeduced and unanticipated by either country. This is no minor shortcoming in our estimation of the strength and dangerousness of the enemy. Not since Hannibal failed to attack Rome has military intelligence been so off target. Whatever alleged triumphs can be claimed by the intelligence community they are dwarfed by this screaming demonstration of gargantuan negligence. How rare it is to find such a definitive touchstone of incompetence in otherwise extremely murky waters -- we must all take this unique opportunity to gloat that those who had reason to believe their inadequacy could never be estimated or publicly demonstrated have been caught with their wire-taps down. They certainly knew the precise number of birch trees in the Ukraine, just as the enemy undoubtedly knew the number of ice skates in Vermont, but of exactly what value is all that data when there exists no real intelligence for understanding its significance. The longer the bit string, the less likely it contains a humanly digestible fact.

For what purpose were we gathering all that so-called intelligence? To discover which homosexuals, drunks, embezzlers and philanderers we could blackmail? Blackmail into doing what? Sometimes it seems that the goal of the NSA and/or the CIA was to undermine our moral superiority over our adversaries, perhaps in

anticipatory mitigation of the possibility that we might lose the Cold War. Somewhere in the remote files of the State Department there undoubtedly exist memos predicting the landing of Martians, the location of Atlantis, and the evaporation of Communism. There must be a mighty search going on right now for copies of that latter memo.

But the truth remains that, without benefit of American military intelligence, the cold war was won because the Russians were simply tired of Communism. Probably one of the most tedious and offensive aspects of the Communist system was its penchant for spying and data-gathering. People can stand the military impinging on their liberty only so long before they question whether the cure is actually worse than the disease. And whatever the Communist Party self-righteously thought they knew about their own dissidents what they failed to realize was that they had along the way alienated nearly their entire population by their intrusions on personal liberty. One theory is that Russia gathered so much data that they imploded under the gravitational collapse of their inability to find the forest for the trees. And if we begin devoting our resources to decoding every conversation on the planet, we shall be the next victims of this decrypto-hubris.

There is no question but that the intelligence community will counter this argument with the automatic response, "we would love to tell you all the wonderful things we were able to do with our magnificent collection of intercepted messages, but unfortunately all such material is top secret; but trust us we saved the free world countless times because of all the data we had assembled through spying."[50] By an unprecedented quirk of fate we are in a position today to know for a fact that this is all poppycock. The KGB files are up for public sale

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[50] This paper was originally presented at a conference on *Cryptography: Technology, Economics and Law* sponsored by the Columbia Institute for Tele-Information on March 3, 1995. It was followed by a rebuttal from an attorney who formerly represented the NSA. The audience was a collection of Law Professors, Computer Scientists and experts in Political Science. To disprove that relevant experts mistrust the reassurances of the intelligence community, which is a major contention of this paper, the respondent confidently called a straw poll to see how many in the hall would believe his sincere claim that ITAR was necessary on grounds that, for security reasons, he could not divulge. Of the fifty-odd there, three were willing to admit that they could believe such an assertion on faith alone. This was not a happy surprise to the respondent. Not only does this illustrate the point that the credibility and/or effectiveness of the intelligence community has become suspect, but it illustrates how unaware, out-of-touch and alienated that community has become from those whose help it needs so desperately to perform its task in the service of the nation. More on this below.

and the secrets spew from our former enemies like childhood reminiscences from a babushka. Just how accurate was our assessment of the Soviet Union as to the magnitude of the threat it posed to our security and how to alleviate it? Not very.

It now turns out that the policy of detente did exactly the opposite of what we were told it would do. By easing internal Russian stresses as it did by allowing them to withdraw scarce resources from their overly-costly military projects and rechannel them to quiet some of the discontent at home, detente actually helped to keep the Soviet Union alive twenty years longer than it could have otherwise endured. If that was in the best interest of our national security an explanation is necessary. And where did this questionable, counter-productive, Cold War coup come from? Henry Kissinger, who was from 1969 to 1975 Assistant to the President for National Security Affairs before becoming Secretary of State. Whatever the State Department thought it knew about the conditions in Russia it was apparently dead wrong. It sort of reminds us of the accuracy of the CIA and DIA information about how long it would take us to win the war in Vietnam, or to overthrow Castro, for that matter.

Gathering secret data was a Nixon specialty that seems not to have redounded to his advantage. When Nixon tried to withhold the Watergate tapes from the special prosecutor on grounds he assured us were of the utmost importance to crucial national security interests the Court was unimpressed[51]. Secrecy for reasons of national security is the last refuge of the scoundrel.

There may be one significant, though paradoxical, way in which America has indeed benefitted from spying. The single greatest intelligence-gathering feat in recorded history was one in which we seemingly played the victim. The Rosenbergs stole the Atom Bomb secrets and shipped them off to Stalin. This was deemed a tragedy of unprecedented proportions. It was, however, a tragedy that cost the lives of exactly two Americans -- Julius and Ethel. No American has ever died from the detonation of a Soviet atomic bomb, unless it was some secret agent who got too close while snooping on their nuclear testing. Arguably it was solely because Russia

[51] *United States v. Nixon*, 418 U.S. 683 (1974).

had a bomb that established a balance of terror, that, in turn, kept the best and the brightest from leading us fearlessly into an all out war with Communism. A war which would have cost millions of lives even if our opponent didn't have a nuclear weapon. This was a war which never occurred and which we won anyway.

As to the value of military intelligence, in particular code-breaking, in the wars that did occur, we take the similar iconoclastic position -- that what we have been told was a miraculous blessing may quite well have been otherwise.

Let us revisit World War II and analyze Germany's chances of ultimate world conquest after expelling, or repelling from Europe, the majority of the researchers who developed the Atomic bomb, and dropping them right into our lap. These scientists were so outraged by the murderous nature of the Nazi regime that their willingness to participate in military research for us was inflamed. Even the devout pacifist Einstein was inspired to facilitate the development of the supreme weapon. The Nazi policies of trampling on human rights, which they mistakenly thought were in their military best interest, turn out actually to have incensed a powerful segment of their population to rise up against them -- a segment which, because it was historically[52] inherently non-belligerent, was politically deemed to be of no military loss. We contend that this is not a bizarre quirk of unique bad luck, but a universal political law, consistent throughout history, which has forever remained invisible to opportunistic adventurers. When an insensitive government alienates their citizens of good character, two things are always true: the nation suffers a great loss, and those in power are oblivious to the loss. No one knows how many people of talent were lost to government service in this country because of the distasteful government machinations behind the Vietnam War. The only thing that is certain is that the military will be quick to reassure us that they are confident that there was no such injury whatsoever. This conclusion is based, like most of their other policies, on a total inability to perceive the downside against which to weigh their decisions. ITAR is a case in point -- the military clearly has no way of calculating any negative political, scientific or psychological effect this policy might have, and therefore presumes there is none.

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[52] With the notable exceptions of the war-machines of Archimedes and DaVinci.

Germany today has General George Patton to thank for the fact that they were not ground zero for the birth of the atomic age. Bletchley-Colossus and the OSS, which are generally hailed as ultra-grand examples of the efficacy of decryption, possibly were responsible for causing more harm than good. Aside from motivating the bombing of Coventry, they enabled the Allied High Command to implement the aggressive strategies of Eisenhower rather than the cautious strategies of Montgomery. We therefore rushed into such adventures as the bloody invasion at Normandy, and Patton's costly march across the Rhine. Today we can see that these belligerent and costly exploits were of dubious urgency. The other great intelligence victories from that war, such as deciphering the Japanese correspondence detailing the intended raid on Pearl Harbor (great life-saver, that) and the decoded naval information that led us into the superfluous battles in the Coral Sea and at Midway, can all be seen in retrospect to be far less wonderful than previously advertised. Midway was unquestionably an outstanding triumph, yet it was far from pivotal -- it did not change the identity of the ultimate winner of the war, nor did it hasten the date of victory by even five minutes. The simple truth is that the facts of exactly how the war was going to end and approximately when that would happen, were already available. The broken codes merely enabled the Allies to engage in seemingly heroic atavistic field victories which may have had psychological value (or military ego-gratification) but were largely dispensable. Our fleet was not trapped at Midway. This is a battle we sought out, that could have been averted, and that simply cost extra lives.

It was exactly the conceit and presumptuousness, fostered by the secret military advantage that derived from the decoded intelligence data, that induced our military leaders to take a more truculent approach to the wars in Europe and in the Pacific than prudence would otherwise have dictated. The superior strategy would have been to minimize casualties until the nuclear arsenal was ready. Therefore, without actually affecting the ultimate outcome of the war, the breaking of the enemy codes arguably cost thousands of lives that might otherwise have been spared by cautiously awaiting the completion of the Manhattan Project. Since the public had no knowledge that these victories were based on the exploitation of the hard facts of enemy weaknesses and the certainty of the element of surprise, they seemed like the product of glorious Napoleonic-style tactical and strategic genius. We now know that certain other information, such as what was happening in the Nazi death camps, was ignored to protect or enhance the "advantage" of code-breaking. This may not have been

the most wise or most moral of tactical decisions. This harkens back to the point that the accumulation of secret information, no matter how vital, does not necessarily enhance the policy-making process. It can be easily misleading through its unsuspected incompleteness and its proclivity to support belligerence over discretion. It is quite possible that it was the artifactual impression of military competence, instilled by the deceptions on the public concerning our victory in World War II, that drove us into the misadventures of Korea and Vietnam. Without the added benefits of nuclear weapons and broken codes it seems our generals are really not that much better than everyone else's. Trusting the military to make its own policy is a deadly mistake. Only fools would be willing at this point to believe that ITAR is a necessary policy for reasons of secret national security.

Germany had already lost World War II in 1933, before the first shots were fired, when they drove out their most valuable assets by instituting repressive, authoritarian, anti-liberty statutes in the name of national security. There is a direct chain from the expulsion of Germany's free-thinking scientists to the ineluctable defeat of the Axis powers. And the chain reacts. Just as the Bucy report implies, technology is the balance of military power. The thought is ancient and often re-proven. If America develops an atmosphere hostile to the free flow of scientific ideas it is inevitable that the scientists will react, as they have always done before, by going where they can best continue their research in an atmosphere of unfettered international cross-pollination. We have been the unwitting beneficiary of the free flow of scientists, and yet we now wish to interrupt the free flow of science. And nobody in the military seems to be concerned about this conspicuous paradox. It is true that we might only lose some of the good ones, but just how many undigestible pieces of eavesdropped gossip would compensate for the loss of even one potential scientific breakthrough?

The Bucy Report expressly stated that we rely for our national security on the unparalleled effectiveness and productivity of our technological community. And yet, without knowing what made that system work in the first place, the military intends to tamper with it. When asked by a kibitzer why he made a certain knight-move, world chess champion Wilhelm Steinitz turned to him and said, "Have you ever observed a monkey staring at the workings of a clock?" Isn't it odd that the NSA realizes that ITAR can throw a monkey-wrench into the development of European technology, and simultaneously have no fears about what might impede our own?

The growth of creative mathematical ideas that actually do work is considerably more impressive than the rate of contribution coming from the intelligence community and its affiliated policy think tanks. Those with the power to regulate, tend to desire to regulate even those aspects of society of whose delicate balances they are purely ignorant. This is true for those who misinterpret their electoral mandate, and goes double for mere appointees.

What ultimately defeated Germany was its unconscionable political tampering with personal freedom. What ultimately defeated the Soviet Union was its undue political tampering with personal freedom. Just because we have intercepted and decoded German and Russian political memoranda does not mean we must adopt them as American policy.

V. ALIENATION OF AFFECTION

The one thing that seems to perennially baffle the intelligence community is the intelligence community itself. Do we have a theory of what creates a Kim Philby, Anthony Blunt, and, closer to home, the Walker family, Jonathan Pollard, Aldrich Ames etc.? For the various Brits, by their own testimony, corroborated by recent revelations of their Russian controls, it was their alienation from their native country engendered by their inside look at their own intelligence operations. It was the 1930's version of Western ITAR-thinking. They mistakenly believed that Russia stood for the free flow of ideas, and the untrammeled development of human potential with a helping hand to the downtrodden masses of the third world; while the West stood for imperialism, greedy isolationism, and secret government control of individual destinies. Who in the NSA is hellbent on making Philby's misperception come true? The treason of the recent Americans seems (perhaps by self-serving confession) also to have been a response to their exposure to the inner workings of the intelligence community giving rise to the amorally enabling position "what-the-hell-we're-no-better-than-they-are."

Let us focus on the question of why it is that we cannot usefully interpret the data we have collected already? The answer is in part, as previously implied, that many truly smart and good people, with a heightened sensitivity

to civil and personal rights, would never consider coopting themselves by working as administration policy analysts. There is an air of unwholesome paternalism to this profession that drove Daniel Elsberg to the New York Times, while attracting the likes of Haldemann, Erlichman, and Oliver North. When the National Security Agency can advocate a seemingly authoritarian policy like ITAR, which views the rights and sensitivities of scientists as secondary to their own desire to do that which is of questionable moral stature, of probably little value, and certainly effective for a very brief period of time, if ever -- it diminishes the perception which the intellectual community has of the intelligence community -- which is already not very exalted.

It cannot be in the national interest for these groups to diverge; much less be at war. Yet these groups are at war. They manifest a mutual disdain. The intelligence community has no concept that they are responsible for this alienation, nor do they have the perspective to realize that in so doing they have hampered their own effectiveness and thereby harmed the national interest. There is no variable in their regression analysis to accommodate the negative impact of their policies -- neither the scientific, the economic nor the psychological. They are fixated on the McCarthy/Nixon approach that all who criticize them merely exhibit dubious patriotism and would never have desired to make valuable contributions to America anyway. With McCarthy and Nixon this syndrome arose out of fears of personal inadequacy. From whence does this feeling arise in the military? They never view themselves as servants to the will and mores of society; they are possessors of secret information and therefore deem they know what is good for us better than we do ourselves. Yet the acid tests for whether their presumptuous paternalism has benefitted this country or not, seems invariably to indicate that for all their machinations the good that happened would have happened just as well without their officious intermeddling, while the bad might never have arisen. The success of America is based on its freedoms -- its free market, its free speech and its free global interaction -- not its controversial searches and seizures. This is not to advocate that the military be governed by the whims of uninformed scientists any more than that science be governed by the whims of the uninformed military -- the suggestion is merely that before setting out to do something as drastic as the exercise of prior restraints on speech, which is constitutionally inherently suspect (and with excellent reason), that they weigh the harm this may do to their reputation against the uncertain nature of the conjectured advantage. Even if ITAR squeaks past Court scrutiny it represents the

institutionalized disregard for the principles that our military is supposedly willing to lay down their lives to preserve. They have stars on their shoulders and stripes on their sleeves, but they do not have the flag in their hearts.

If enacted completely as originally envisioned will ITAR keep unbreakable encryption out of he hands of our mortal enemies, such as say Saddam Husein? Not very likely. There are too many other channels through which this technology may be obtained. ITAR will be at best only somewhat effective in retarding the spread of the dreaded technology. If the hope is that by the time encryption proliferates to the rest of the world our lead-time advantage will have enabled us to invent methods of deciphering these "unbreakable" codes the presumption is unrealistic. But even if ITAR is only partially effective it is not merely partially repugnant to standards of human/scientific/economic rights. The trend in civilization is to abandon offensive and unreliable methods of policing, as witnessed by the disrepute to which torture has sunk.

The presumption that technology is something that we've got and maybe it's better for us if we keep it from the rest of the world, is not only incorrect and immoral, it is dangerous. What if ITAR triggers as a backlash, a proliferation of technological protectionism against us? If we play the game of us-versus-the-rest-of-the-world just how long will it be before we disintegrate by having used the John Foster Dulles tactic of isolation and containment on ourselves? We have met the enemy and he is us[53]. Why can't we just let well enough alone, and give peace a chance. It might even be in the best interests of national security.

[53]Walt Kelly, *Pogo*: We Have Met the Enemy and He Is Us, New York: Simon and Schuster, 1972.