

A RAND NOTE

THE MINDSETS OF HIGH-TECHNOLOGY TERRORISTS:
FUTURE IMPLICATIONS FROM AN HISTORICAL ANALOG

David Ronfeldt, William Sater

March 1981

N-1610-SL

Prepared For

Sandia Laboratories

Rand
SANTA MONICA, CA. 90406

Report Documentation Page				Form Approved OMB No. 0704-0188	
Public reporting burden for the collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington VA 22202-4302. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to a penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number.					
1. REPORT DATE MAR 1981		2. REPORT TYPE		3. DATES COVERED 00-00-1981 to 00-00-1981	
4. TITLE AND SUBTITLE The Mindsets of High-Technology Terrorists: Future Implications from an Historical Analog				5a. CONTRACT NUMBER	
				5b. GRANT NUMBER	
				5c. PROGRAM ELEMENT NUMBER	
6. AUTHOR(S)				5d. PROJECT NUMBER	
				5e. TASK NUMBER	
				5f. WORK UNIT NUMBER	
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) Rand Corporation,1776 Main Street,PO Box 2138,Santa Monica,CA,90407-2138				8. PERFORMING ORGANIZATION REPORT NUMBER	
9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES)				10. SPONSOR/MONITOR'S ACRONYM(S)	
				11. SPONSOR/MONITOR'S REPORT NUMBER(S)	
12. DISTRIBUTION/AVAILABILITY STATEMENT Approved for public release; distribution unlimited					
13. SUPPLEMENTARY NOTES					
14. ABSTRACT					
15. SUBJECT TERMS					
16. SECURITY CLASSIFICATION OF:			17. LIMITATION OF ABSTRACT Same as Report (SAR)	18. NUMBER OF PAGES 44	19a. NAME OF RESPONSIBLE PERSON
a. REPORT unclassified	b. ABSTRACT unclassified	c. THIS PAGE unclassified			

A RAND NOTE

THE MINDSETS OF HIGH-TECHNOLOGY TERRORISTS:
FUTURE IMPLICATIONS FROM AN HISTORICAL ANALOG

David Ronfeldt and William Sater

March 1981

N-1610-SL

Prepared For

Sandia Laboratories

Rand
SANTA MONICA, CA. 90406

The research described in this note was sponsored by Sandia Laboratories under Contract No. 46-3195.

The Rand Publications Series: The Report is the principal publication documenting and transmitting Rand's major research findings and final research results. The Rand Note reports other outputs of sponsored research for general distribution. Publications of The Rand Corporation do not necessarily reflect the opinions or policies of the sponsors of Rand research.

PREFACE

As part of a broad study of potential threats to U.S. nuclear programs, The Rand Corporation is collecting and analyzing data on several types of incidents and activities which can provide useful insights into possible acts against nuclear programs, facilities, or materials. This Note is meant to contribute to broader research concerning terrorist intentions and motivations.

The research, sponsored by Sandia Laboratories, was undertaken because those charged with defending against nuclear or other terrorism are obliged to work with virtually a tabula rasa, especially in the United States, where relatively few terrorist attacks have occurred. This study uses dynamite terrorism of the late nineteenth century as an historical analog for speculating about possible future nuclear terrorism. The implications that may be extrapolated from this historical analog are tentative; yet, in conjunction with other analogs under investigation by the Rand research team, they serve to enrich Rand's knowledge and methodology for providing plausible and significant hypotheses about possible future nuclear terrorism.

SUMMARY

How do terrorists rationalize their attraction to high-technology super-explosives? This Note identifies elements of the mindsets of nineteenth century dynamite terrorists, as an historical analog that may provide insights into the psychological and political attributes of possible future nuclear terrorists. A strict comparison of the physical properties of dynamite and nuclear explosives might make the analogy seem implausible. However, the late nineteenth century terrorists believed that dynamite, the premier scientific explosive of its time, could endow them with extraordinary power to accomplish grandiose aims--much as we expect would be the case with nuclear terrorists. An examination of the thoughts and actions of the dynamite terrorists thus leads to the identification of some central themes that have occurred, and may recur, in the mindsets of terrorists who are attracted to high-technology super-explosives.

One set of themes concerns the philosophical, even metaphysical, nature of the power that the terrorists attributed to dynamite:

- o Super-explosives represent "power to the people." In this view, man's historical progress is based ultimately on the people's resort to the latest instruments of violence.
- o Super-explosives may represent scientific power. Accordingly, the highest form of revolutionary terror should rely on the most advanced science and technology of the time.

- o Super-explosive terrorism may represent a moral form of power. Whereas conventional weapons arouse conventional prejudices, new high-technology weapons elevate violence above the level of common criminality.
- o Super-explosives may be considered a humane form of power. By viewing the system as inhumane and immoral, terrorists claim that the more quickly it is destroyed, the better for humanity.
- o Super-explosives may endow the terrorist with a mystical, magical kind of power, useful for charming the audience and perhaps creating a breakthrough to a revolutionary new time.

The most dangerous mindset would probably combine all these themes. But the use of high-technology super-explosives seems particularly appealing to terrorists who have more interest in wielding "scientific power" than in promoting "power to the people."

Another set of themes concerns the uses of such power. The objectives of past dynamite terrorists included attracting attention to demands, avenging wrongs, defending the interests of the weak, introducing radical reforms in a system, and eradicating the existing social order. The most dangerous mindset would probably emphasize a combination of vengeful punishment and millennial destruction.

Historical analogy suggests that we should expect similar patterns among possible future terrorists--especially if those terrorists are able to acquire or make improvised nuclear devices.

CONTENTS

PREFACE	iii
SUMMARY	v

Section

I. 19TH CENTURY DYNAMITE ANARCHISTS : ANALOGS FOR 20TH CENTURY NUCLEAR TERRORISTS ?	1
The Analog	2
Methodology and Limitations	4
II. DYNAMITE TERRORISM IN THOUGHT AND ACTION	5
Dynamite Terrorism in Practice	6
The Endowed Powers of Dynamite	11
The Dynamiters' Objectives	17
III. IMPLICATIONS FOR POSSIBLE FUTURE NUCLEAR MILLENIALISM	25
The Nature of Super-Explosive Power	25
The Uses of Super-Explosive Power	28
Diverse Tactics	31
How a Nuclear Terrorist Group Might be Formed: Two Possible Models	32

I. 19TH CENTURY DYNAMITE ANARCHISTS : ANALOGS FOR
20TH CENTURY NUCLEAR TERRORISTS ?

"Terror will be terror in the true sense of the word only if it represents the revolutionary implementation of the most advanced technical sciences at any given moment."

(A proponent of dynamite terrorism speaking at the Fifth Conference of Social Revolutionaries in 1909.)

This Note contributes to Rand research on the possible intentions and motivations of individuals or groups who might threaten nuclear terrorism in the future. A recent Rand report concluded that "we are liable to see coercive actions in the nuclear domain intended to cause widespread alarm and increase the leverage of a terrorist group making demands on government." The report further hypothesized that nuclear terrorism "would be more likely among the most fanatical and violent terrorist groups, those with more millennial aims as opposed to a concrete political program." [1]

To develop such speculative formulations, we have relied largely on an analog methodology that draws inferences from past and present cases of non-nuclear terrorism, as well as other crimes that have attributes likely to be associated with possible future nuclear terrorism. We have sought to penetrate the psychological mindsets of terrorist adversaries by examining the communiques and manifestos of terrorist groups, the

[1] Gail Bass, Brian Jenkins, Konrad Kellen, Joseph Krofcheck, Geraldine Petty, Robert Reinstedt, and David Ronfeldt, Motivations and Possible Actions of Potential Criminal Adversaries of U.S. Nuclear Programs, The Rand Corporation, R-2554-SL, February 1980.

biographies and autobiographies of terrorists, and the various theories of terrorist behavior. We have begun looking for patterns among the factors that turn individuals into terrorists, the ways in which terrorists view the world and themselves in it, the motivations that lead them to do what they do, and the reasons for preferring the tactics and targets that characterize their behavior.[2]

THE ANALOG

In searching for potential historical analogs that may provide insights into possible future nuclear terrorism, we noticed that during the late nineteenth century an earlier generation of "high-technology terrorists" specialized in using dynamite, which was the premier scientific explosive of their time. These individuals saw dynamite as possessing special, even mystical, powers in addition to its real physical properties. Some dynamite-prone terrorists created philosophical doctrines that urged revolutionaries to unify around that vanguard technology. They claimed that the use of this technology would guarantee the leveling of the old order, thereby ushering in the creation of a secular millenium. The dynamite-prone terrorists appeared amidst a broader wave of revolutionary anarchism and international terrorism--the first great wave to afflict Europe and America in modern times.

A strict comparison of the physical properties of dynamite and nuclear explosives might make the analogy between nineteenth century dynamite terrorism and twentieth century nuclear terrorism seem

[2] See Konrad Kellen, Terrorists--What Are They Like? How Some Terrorists Describe Their World and Actions, The Rand Corporation, N-1300-SL, November 1979.

implausible. Although both are the high-technology, premier explosives of their times, providing a quantum jump in destructive capability over what was previously possible, dynamite (and its volatile cousin, nitroglycerine) never provided a capability to devastate cities or create an apocalyptic holocaust. Dynamite was rapidly and widely introduced for peaceful engineering and industrial uses, thus becoming quite easily accessible for other purposes. The production of dynamite involved a comparatively simple chemical process and required no extraordinary ingredients. Bombs made of dynamite were easily portable and safe to use, and their effects were controllable. Dynamite also could be deployed selectively--for example, for the assassination of a precise individual or the partial demolition of a building. Thus, the rationale for the analogy is limited by the physical properties and capabilities that are inherent in each kind of device.

What makes the analogy meaningful, and potentially instructive, however, are the psycho-political attributes. The dynamite-prone terrorists believed that dynamite endowed them with extraordinary power to accomplish grandiose purposes--much as we suspect might be the case with nuclear terrorists. Years, even decades, passed before it became entirely clear to terrorists, and to security officials, that dynamite would not in fact enable a few determined radicals to inflict unlimited damage, topple governments, or wreck entire societies. Meanwhile, the motivations, intentions, and mindsets of those dynamite-prone terrorists seem to have had special attributes that we should consider in speculating about future terrorists who might be attracted to high-technology ultra-explosives. The possibility that improvised nuclear devices may

become available in the future makes the analogy seem even more pertinent.

METHODOLOGY AND LIMITATIONS

Our methodology relies heavily on readily accessible data on individuals who advocated or practiced "dynamite terrorism." Such information, unfortunately, is scarce and incomplete. We found some information in selected anarchist publications,[3] and some was obtained from secondary anarchist writings. Often we were unable to determine whether quotations were made by armchair propagandists or by genuine activists. We do not know whether individuals we have grouped together as "dynamite terrorists" should be further distinguished as anarchists, syndicalists, socialists, communists, nihilists, millennialists, or something else that may have important consequences for their intentions and motivations. We have included material on dynamite terrorism in the United States and a variety of European countries, although clearly the contextual or environmental factors differed widely among countries. While the data are insufficient to provide an authoritative, scholarly study of dynamite terrorism, we feel that they can serve as a reasonable basis for an exploratory and speculative discussion of why terrorists sometimes become attracted to high-technology explosives. The information, particularly that revealed in quotations, seems to indicate some central themes that have occurred, and that might recur, in the mindsets of such terrorists. Section II discusses those themes.

[3] In particular, we relied on two American anarchist periodicals, Truth and Alarm.

II. DYNAMITE TERRORISM IN THOUGHT AND ACTION

"The past year has been remarkable for the number and grave character of the outrages which have been accomplished or attempted abroad, in furtherance of political, social, industrial, or personal objects. At no former period of our experience have there been so many desperate attempts--some of them only too fatally successful--to destroy life and property by means of dynamite and similar explosives. There is only one gratifying consideration in connexion with the long and dreary list of these outrages, and that is, that the frequency and cosmopolitan character of crimes of this sort probably bring us so much nearer to the time when an international agreement will be arrived at whereby criminals of this class will, like pirates, be treated as enemies of the human race, and pursued with relentless vigour from country to country, and debarred from shelter or sympathy in any part of the civilised world, and this without reference to whether the actuating motive was political, industrial or other. Indeed, it is difficult to understand how any motive can be deemed to sanctify or palliate so horrible and dastardly a form of offence, one of the most deplorable features of which, as we have before remarked, is the callous indifference to whether the consequences fall on persons wholly innocent of any participation in, and unconnected with, the particular matter or cause against which the crime is directed."

(Col. V.D. Majendie, C.B.,
HM Inspector of Explosives, 1892)

Man's capacity for destruction made a quantum jump following the invention of nitroglycerine in Italy in 1846. At first, nitroglycerine suffered from one major defect: Its chemical instability made it hazardous for the user. However, after Alfred Nobel tamed the powerful compound in 1867 by mixing it with wood pulp and sodium nitrate, the resulting invention, dynamite, could be employed with little risk. Knowledge of the required chemistry remained restricted to professional circles for a while, but it soon became as readily available as the

ingredients for fabrication. As dynamite became relatively cheap and easy to make or acquire, its applications spread from science to industry to politics, and it became the premier explosive of its time.

DYNAMITE TERRORISM IN PRACTICE

The proliferation of dynamite coincided with the first great wave of terrorism in the late nineteenth century. In Europe, three terrorist groups who used dynamite proved unusually violent for their times: the Russian People's Will, the transnational Anarchists, and the Irish Fenians. The Russian People's Will fought to destroy authoritarian government and create socialism in Russia. The Anarchists wished to eradicate all institutions of state and property and to spread violence against democratic as well as dictatorial governments. The Fenians were ethno-nationalists who sought liberation from British colonial rule. Many of the leaders and members of such groups were from relatively urbane, educated, middle-class backgrounds.

Conventional tactics of shooting and stabbing selected statesmen and bureaucrats had become a favorite way of implementing the idea of "direct action." The Anarchists even formed an international network of assassins intent upon using murder to destroy the capitalist economic system and the states that fostered and protected it. Soon victims began to fall throughout the Western world: an Italian king, a Spanish prime minister, an Austrian empress, the presidents of France and the United States--even an Argentine police chief.

For bigger and more dramatic actions, the anarchists and terrorists then turned to the dynamite bomb, which they hoped would shatter the

governments and ruling classes. French anarchists had a song praising its destructive qualities, and one secret society published a journal called Le Dynamite. [1] August Reinsdorf tried to blow up the Kaiser, the Crown Prince, and various dignitaries at the unveiling of a monument. Stephan Khalturin tried to kill the Tsar in 1880 by smuggling into the Winter Palace 100 pounds of dynamite; the ensuing detonation killed 11 and injured 56, but the Emperor escaped. Boris Savinkov and other Social Revolutionaries went to enormous lengths to kill Tsarist officials with dynamite when more conventional weapons would have sufficed. [2] In France, August Vaillant threw a bomb into a session of the National Assembly, proclaiming that he wished to punish those who were responsible for social misery. Another assassin, Emile Henry, willing to kill the faceless as well as the famous, hurled a bomb at a cafe in order to murder the bourgeoisie whose mere existence offended him. [3] In Britain, the Fenians launched dynamite attacks against the Tower of London and the House of Lords. [4] Elsewhere, Indian nationalists who wanted to oust British colonialists became so entranced with the new explosive that they sent agents to Europe to learn how to make bombs. [5] By comparison, dynamite politics did not seem as popular in the United

[1] Irving L. Horowitz, Radicalism and the Revolt Against Reason, Humanities Press, 1961, p. 29; Andrew Carlson, Anarchism in Germany, Scarecrow Press, 1972, Vol. I, p. 254.

[2] Franco Venturi, Roots of Revolution, Knopf, 1960, p. 686; Boris Savinkov, Memories of a Terrorist, Albert and Charles Boni, 1931, pp. 26-37, 76; A. Yarmolinsky, Road to Revolution, Macmillan, 1959, pp. 258-259.

[3] Max Nomad, Dreamers, Dynamiters and Demagogues, Walden Press, 1964, p. 48; John J.C. Longoni, Four Patients of Dr. Deibler, Lawrence and Wishart, 1970, pp. 30-31, 166.

[4] K.R.M. Short, The Dynamite War, Humanities Press, 1979, pp. 143, 240.

[5] Ram Gopal, How India Struggled for Freedom, Book Centre, 1967, p. 185.

States--although someone did explode a bomb at Haymarket Square in Chicago, and dynamite played a part in some labor strife.[6]

Some terrorists merely had to threaten the use of dynamite or create hoaxes to spread fear and alarm among the authorities. In 1885, some anarchists who were furious at a proposal to change Swiss refugee policy threatened to blow up the Federal Assembly in Bern. German customs officials, when informed of an assassination plot to kill Wilhelm II, began to search frantically for a woman who was supposedly traveling from New York to Bremen transporting four trunks filled with dynamite. Both threats proved to be groundless. Similar hoaxes occurred elsewhere. The German Emperor and his nobility, as well as the bourgeoisie, lived in fear of bomb threats.[7] The British Consul in Leghorn once reported to London that some Italian technicians had prepared dynamite bombs, disguised as coal, which were to be placed in the holds of English merchant vessels. While this did not occur, the British police did apprehend various individuals smuggling dynamite into English ports for use by Fenian terrorists.[8] Paris was convulsed by fear of bombs following retaliatory dynamite attacks launched to avenge the capture of the terrorist Ravachol, who had screamed, "Long live anarchism! Long live dynamite!," when he was captured. It was said that "the smallest sardine-tin flung on a pile of rubbish was mistaken for an explosive device and sent to the municipal laboratory with a thousand precautions." [9] Similar hysteria gripped London during the Fenian dynamite

[6] R. Jeffrey-Jones, Violence and Reform in American History, New Viewpoints, 1978, p. 71.

[7] Carlson, op. cit., pp. 261, 270, 274-75.

[8] Short, op. cit., pp. 68-69.

[9] Longoni, op. cit., p. 31.

raids of 1883-1885. Even the United States did not escape the dynamite hoaxes: It was rumored in a radical journal that a Vanderbilt dress ball might become the object of a bomb attack intended as a rebuke to the wealthy.[10]

In the early years of dynamite terrorism, before the limitations of the explosive were clear, perpetrators and defenders alike attributed extraordinary capabilities to dynamite and posed fearful scenarios for its use. It was claimed that dynamite politics could literally destroy cities and make armies useless. For example, Irish terrorists threatened to use dynamite to level London and blow up every English ship. While the threat proved illusory, Fenians used dynamite to attack London's subway system as well as such symbolic targets as the Tower of London, Scotland Yard, Nelson's Column, and the House of Commons.[11] In the United States, General Philip Sheridan reportedly warned that the commerce of entire cities could be destroyed by infuriated people who could easily make the explosives and safely carry them in the pockets of their clothing. And concern spread that a new generation of dynamite weapons, including an "international dynamite rifle," could place even more power in the hands of proletarian revolutionaries and terrorists.[12]

Various governments sought to curb the weapon. The Reichstag passed the "Dynamitgesetz" to punish those who used or owned dynamite, and imprisoned for five years anyone who encouraged the use of the

[10] Truth, 14 April 1883; Joseph P. O'Grady, Irish Americans and Anglo American Relations, 1880-1888, Arno Press, 1976, p. 200.

[11] Truth, 5 May 1883.

[12] O'Grady, pp. 195-200, Alarm, 6 December 1884.

explosive or glorified any such act. In just 24 hours, the British parliament rushed through a measure which punished with life imprisonment anyone who exploded a dynamite bomb. Mere illegal possession would bring a sentence of 14 years of penal servitude. France apparently passed similar legislation.[13]

Unrestrained by such penalties, various anarchists who wanted dynamite to become the workingman's weapon of self-defense disseminated information on how to fabricate, purchase, or simply steal the explosive. In the United States, Professor Mezzeroof, who might be dubbed the Johnny Appleseed of dynamite, considered it his duty to educate men in how to make and use the explosive. He claimed he would not rest until every American and European workingman knew "how to use explosives against autocratic government and grasping monopolistic lies." [14] Of particular notoriety in Europe, Johann Most published a German-language anarchist journal, Freiheit, which praised dynamite as a force to amplify the people's will. His booklet on anarchist tactics provided the model for a modern version, The Anarchist Cookbook, which circulated among student radicals in the 1960s.[15] Convinced that dynamite could be used to change world history, Most went to work in an explosives factory in New Jersey to learn how to produce the weapon. Then he published his report on how workers and revolutionaries could make dynamite with lay knowledge, without squandering money on expensive and complex systems. Furthering his effort to popularize the home fabrication of

[13] Carlson, p. 293; Short, pp. 143, 240; Longoni, p. 71; O'Grady, p. 185.

[14] Truth, 26 May 1883.

[15] Die Freiheit, New York and London, 8 March 1884, 27 June 1885.

dynamite, other radical papers either reprinted Most's article or published their own original research. However, Most and many of his colleagues eventually concluded that it was easier, safer, and cheaper to purchase or steal the dynamite than to manufacture it themselves.[16]

THE ENDOWED POWERS OF DYNAMITE

Dynamite possessed certain innate attributes, while others were endowed or ascribed to it. The innate attributes included its explosive power, its portability, and the ease and safety of its use. It can be planted, then detonated at a later time by timing devices, and its effects can be controlled and made precise. Soon after its invention, it became publicly accessible, through purchase, fabrication, or theft, so that terrorists acting as single individuals or in small groups could wield unprecedented destructive power, and government officials saw little hope of defending against skilled and determined attackers. The novelty of dynamite, combined with the lack of experience with its terrorist applications, heightened the sense that dynamite was a potent destructive weapon against which the state would be unable to defend itself.

Terrorists and anarchists who were attracted to dynamite because of its innate properties endowed it with special powers as well--political, scientific, moral, humane, and/or magical. Statements about these endowed powers reflect the intentions, motivations, and mindsets of these terrorists and are described below.

[16] Johann Most, Revolutionare Kriegswissenschaft, Internationaler Zeitungs-Verein, 1885.

Dynamite as Power for the People

Many proponents of dynamite terrorism argued that dynamite could endow the ordinarily powerless man with enormous political strength, magnifying the power of individuals and small groups and forcing recognition by the masses as well as the authorities. Workers allegedly now had access to a tool that could enable the individual who sought change (i.e., good) to overcome the power of the conservative state (i.e., evil). It was even possible to eradicate property as the basis of the state. Dynamite could end the state's "monopoly of violence," and henceforth neither the aristocracy nor the bourgeois state could compel the poor to cower.[17] According to Albert Parsons, convicted for participation in the Haymarket Riot,

Today dynamite comes as the emancipator of man from the domination and enslavement of his fellow man ... it is democratic; it makes everybody equal ... it emancipates the world from the domineering of the few over the many.... Force is the law of the universe; it is the law of nature, and this newly discovered force makes all men equal and therefore free.... Science has now given every human being that power.[18]

Dynamite's ability to strengthen the people was thought to be a natural consequence of historical processes. The dynamite advocates regarded the tools of violence as central to the history of social change: The crossbow had unseated the horse-mounted nobility, and gunpowder had demolished castle walls. Indeed, gunpowder seemed responsible for the destruction of feudalism and the subsequent spread of new movements to free the masses. Now dynamite would enable the industrial

[17] Alarm, 30 June 1888.

[18] Lucy Parsons, Mass Violence in America, Arno Press, 1969, p.82

working classes to destroy the new bourgeois state. Thus, one exponent of dynamite praised the

invention of gun powder, cannon, and firearms, making a single man often more formidable than a phalanx of ancient swordsmen. Every increase in the destructiveness of weapons of war has brought increased respect and importance for the individual war maker. Thus, today the poorest Nihilist with his dynamite is an object of more consideration from the Czar and his nobles than would be forty thousand serfs of olden times armed simply with staves and forks.[19]

According to an American anarchist,

The reign of the bourgeoisie rests, as we have said, on gun powder. It cannot survive the use by the proletariat of a weapon requiring no capital, and against which gun powder would be as impotent as armor and castles against gun powder. Such a weapon is dynamite.[20]

And according to a leading theoretician of dynamite terrorism, Johann Most,

It is obvious that these explosives are the decisive factor in the next chapter of human history.[21]

Dynamite as Scientific Power

A good part of dynamite's appeal derived from the fact that it was then the ultimate scientific weapon. The terrorists justified dynamite violence by claiming that it could be the scientific instrument for imposing Marxist concepts of scientific socialism. They said it was

[19] Truth, 9 June 1883.

[20] C. L. James, "Tract for Time," in A. Parsons, Anarchism: Its Philosophy and Scientific Basis, Greenwood Press, 1970, p. 162.

[21] Most, Revolutionare Kriegswissenschaft.

logical for science, history, and progress to enable the individual to turn science against the state. Thus, one radical declared,

Dynamite! Of all the good stuff, this is the stuff.... In giving dynamite to the downtrodden millions of the globe, science has done its best work.[22]

The Irish Fenians reportedly believed that dynamite was a "gift of science." [23]

Some extremists believed that dynamite would elevate terrorism to the status of a vanguard scientific movement. Many revolutionaries and terrorists of the time were in fact scientists by education if not by occupation--a background that may have motivated their interests in using "science" as the critical instrument for radical change. An extreme development of this idea emerged at the Fifth Conference of Social Revolutionaries in 1909, when a speaker argued that "Terror will be terror in the true sense of the word only if it represents the revolutionary implementation of the achievements of the most advanced technical sciences at any given moment." [24] This extraordinary view reflects a belief that scientific ends and scientific means justify each other; and that using vanguard technology for terror could move the revolutionary struggle into a new, advanced, and more scientific stage. It also seems to imply that "science" rather than "the people" should be the key agent of terrorist violence.

[22] From a letter by T. Lizius, in Alarm, 24 February 1885.

[23] The Economist, 24 March 1883.

[24] Cited in Ze'ev Iviarsky's, "Individual Terror Concept and Typology," Journal of Contemporary History, Vol. 12, 1977, p. 49.

Dynamite as Moral Power

For some terrorists, dynamite represented a moral weapon for political education whose use would enable them to elevate assassination above ordinary murder. Common criminals used the blade or the bullet; revolutionary terrorists should use dynamite. Because conventional weapons for assassination aroused common prejudices, they obscured the morality of revolutionary violence. Resort to the latest scientific weapons--particularly dynamite--would allow the message to transcend banal prejudices. Thus, the choice of weapon had major implications for the morality, clarity, and impact of the message to be conveyed.

In keeping with this rationale, some terrorists became obsessed with assassinating authorities by dynamite. A Russian terrorist of the People's Will, Stephan Khalturin, who worked in the Czar's Winter Palace and who had even been alone with the Czar, chose to kill him by smuggling 100 pounds of dynamite into the building. The detonation, on February 5, 1908, killed 11 and injured 56--but the Emperor escaped harm. More conventional weapons might have been more effective, but the People's Will rejected such banal alternatives because otherwise

this assassination would not have created the same impression. It would have been interpreted as an ordinary murder, and would not have expressed a new stage in the revolutionary movement.[25]

[25] Frolenko, p. 22.

Dynamite as Humane Power

Many viewed dynamite not only as a moral weapon, but also as a humane weapon for destroying the rulers and their states, liberating the poor and working classes, and speeding violent revolution toward its humanitarian ends. This typically reduced to a doctrine of exterminating the few for the benefit of the many. According to an article in Truth, "At first the dynamite bomb seems an implement of fiends, but a closer view discovers in it a potent minister of good." [26] To counter objections to the use of such extreme weaponry, another writer declared,

Those who will do so forget that the real humanity will be found in carrying a war as energetically as possible, in order to gain the end proposed as effectually and speedily as may be. [27]

In the same vein, another anarchist periodical, Alarm, stated the maxim that

It is clearly more humane to blow ten men into eternity than to make ten men starve to death. When ten men unite to starve one man to death, then it is humane and just to blow up the whole ten men.... This is our doctrine and our justification of the application of force. [28]

Dynamite as Mystical, Magical Power

Most of these terrorists treated dynamite power in secular and scientific terms, in keeping with their contemporary socialist, anarchist, and nihilist doctrines. However, some proponents of dynamite

[26] Truth, 9 June 1883.

[27] Truth, 3 November 1883.

[28] Alarm, 13 January 1885.

politics endowed dynamite with mythical, mystical, or magical qualities. According to one enthusiast, "Jupiter with his lightnings was scarcely more a master of the ancient world than is the mob with the bomb of dynamite the avenging Fate of modern monarchies." [29] August Spies, while denouncing slavery, starvation, and death during his turn in the Haymarket Trials, claimed that "science had penetrated the mystery of nature--such that from Jove's head had once more sprung a Minerva--dynamite." [30] An Easterner, Indian nationalist Tilak Bal Gangadhar, regarded dynamite as "more a magical charge than a visible object manufactured in a factory ... a kind of witchcraft, a charm, an amulet." [31] Visualizing dynamite in this way, not only as a product of science but also as an expression of mystical and supernatural forces, may have been a part of the apocalyptic and millennialist views of future revolution.

THE DYNAMITERS' OBJECTIVES

Not only was dynamite considered to provide many kinds of power, the purposes and objectives for which dynamite power might be used were equally varied. Some appear limited; others were grandiose. The range included attracting attention to demands, avenging past wrongs, defending the workingman's rights, forcing the government to reform, and destroying the system for the sake of revolution or the millenium. While these themes were often intermingled in the statements of one writer, they are nonetheless distinct. Each has somewhat different implications

[29] Truth, 9 June 1883.

[30] L. Parsons, p. 15.

[31] Gopal, p. 192.

for tactics; for example, the objective might reflect whether dynamite was perceived primarily as a defensive or offensive weapon, and whether it was the appropriate agent for individual assassinations or for large-scale destruction.

Dynamite as an Instrument for Getting Attention to Demands

Dynamite was said to place such destructive power in the hands of individuals and small groups that the authorities and the masses would have to heed their demands. Thus, dynamite could be used to educate the authorities as well as to compel them to make changes. According to one writer,

whoever says that the assassination of tyrants does not put intelligence into anybody's head is sadly mistaken. Dynamite in its infant career has already set more thought and intelligence in motion than the plain, naked wrongs of labor would have brought out in a century.[32]

Another writer voiced similar sentiments:

Thus, it will be found, when the first mad outburst of murder and destruction has cleared away, that there will follow throughout the world a more ready disposition on the part of governments to listen to the petitions of the humblest classes of the community, and to see that no burden of unjust laws are maddening them to revolt.[33]

And Johann Most declared that

lead and dynamite, poison and knives are the weapons with which our brothers will open the skirmish.... With these the people will be able to argue more strongly and loudly; with these our goals will be attained more surely and quickly.[34]

[32] Truth, 23 July 1883.

[33] Truth, 9 June 1883.

[34] Quoted in Carlson, p. 254.

While attracting attention to demands was usually subordinate to other objectives, it was a critical starting point for many terrorists.

Dynamite as an Instrument of Vengeance and Punishment

Some terrorists stressed the use of dynamite for avenging past injustices by engaging in reprisals to punish the wrongdoers. French anarchist August Vaillant tossed a dynamite bomb into the French legislature to punish those he believed to be responsible for social misery. French terrorist Ravachol held that "Dynamite is the arm of the weak who avenge themselves or avenge others for the humiliating oppression of the strong and their unconscious accomplices." [35] In a similar vein, an essay in Truth once warned that just going around killing leaders would not alter the social situation; destructive violence should not be used promiscuously or indiscriminately, but only in retaliation for some specific wrong. [36]

Dynamite as an Instrument for Self-Defense and Protection

Some proponents of dynamite politics emphasized dynamite's utility for defending and preserving the rights and liberties of the workingman. Since the powerful and privileged classes used force to impose their will, the workers must likewise resort to force to protect themselves. Thus, an article on how to make and use dynamite was dedicated "... for those who will sooner or later be forced to employ its destructive qual-

[35] Prolo, "Les Anarchistes," Paris, 1912, cited in Robert Hunter, Violence and the Labour Movement, Arno Press, 1919, pp. 81-82.

[36] Truth, 14 April 1883.

ities in defense of their rights as men and a sense of preservation...."[37] When the discussion at a U.S. labor meeting turned to dynamite, various members vowed that using force to protect oneself and one's family was legitimate, and that the method of defense was not so important. Dynamite could, they felt, be used to hold off military troops during labor strife.[38]

This theme is prominent in American radical labor politics, where the emphasis was on defending the rights of the workers who fought to make the system responsive to their demands. The theme is less noticeable in the writings of European anarchists who were largely concerned about taking the offense to create revolutions.

Dynamite as an Instrument of Last Resort for Reform (and Revolution)

Many proponents of dynamite politics emphasized its importance as an instrument of last resort, after all other legal means had been exhausted, for compelling the system to reform (although for some, the idea of reform seemed to verge on revolution): Since the rulers used force to preserve the status quo, the workers were justified in using violence to introduce reforms; attempting to persuade the rulers to change was pointless.

Whether dynamite had become necessary as the instrument of final resort depended on broad assessments of how the political system was functioning. The ballot was regarded as the primary alternative to the bomb. According to one writer,

[37] Alarm, 27 June 1885.

[38] Truth, 19 May 1883.

We have a common fallacy that all improvements can be introduced by voting ... but the first instance has yet to be born where the ballot has introduced a new principle.

Produce a new principle and the ballot can and frequently does bring out and develop all its parts, and this is the sole business of the ballot ... [but] a reform must be introduced by a minority or never introduced. When by the use of dynamite, one man can stand off a hundred persecutors, we may expect an age of reformers and reforms. Until then reform must be tediously slow.[39]

The bombs-or-ballots debate became quite heated among the devotees of dynamite. European anarchists, who were typically convinced that the ballot was meaningless and the system unreformable, viewed bombing as the paramount option. A few Americans who believed the United States was similarly beyond reform welcomed dynamite as the antidote to electoral fraud and corruption. A handbill distributed in Indianapolis declared that "one pound of dynamite is better than a bushel of ballots." [40] However, contrary to the prevailing preference for bombs over ballots among European devotees of dynamite, many American radicals demurred.

While they approved of dynamite politics for fighting monarchy and autocracy in Europe, these Americans apparently opposed similar tactics for the United States until established democratic processes offered no hope. Thus, articles in Truth, commenting on the prevalence of dynamite anarchism in Europe, observed that

The times are not quite ripe for such things over here, but there is no reason to conclude that they never will be ripe for them. Let corporate and money power turn the screws once or twice more upon the thumbs of the people and the times may ripen very quickly.[41]

[39] Alarm, 27 June 1885.

[40] Alarm, 24 April 1886.

[41] Truth, 14 April 1883.

The time is coming when journals like Truth will be forcibly suppressed, when meetings of honest citizens will be dispersed at the point of the bayonet, when the producers will be shot down like dogs in the street. When that day does dawn, the hour for using DYNAMITE will have struck. See to it, then, that every free man knows how to make and use it.[42]

Even Professor Mezzeroof, who worked diligently to spread information on how to make and use dynamite, urged Americans not to deploy his inventions "till the government becomes autocratic and you cannot obtain your rights at the polls." [43]

In comparing the conditions of Europe and America, the dynamite activists noted not only the higher degree of suppression and exploitation evident in Europe, but also the higher degree of political consciousness. One writer, commenting on the reliance on dynamite in Europe, doubted that the same situation would occur in America because the people were not "instructed as to the natural rights of man and in their ignorance they imagine their troubles to be a part of the nature of things--something unavoidable." [44] European terrorists seemed more prone to absolutist, black-and-white ideological assessments than their American counterparts.

Dynamite as an Instrument for Anarchic Destruction and Millennial Redemption

Dynamite appealed to some anarchists and terrorists because it might enable them to annihilate the very foundations of the ruling

[42] Truth, 30 June 1883.

[43] Truth, 26 May 1883.

[44] Truth, 23 June 1883.

system, namely, state and property. For them, reform was impossible; revolution was essential. For the dynamite-prone anarchist, revolution meant little more than destruction--by destroying the past and the present, the future would take care of itself. An article in Alarm made the point:

Simply by making ourselves master of the use of dynamite, and then declaring we will make no further claims to ownership in anything, and deny every ... person's right to be owner of anything, and administer instead death, by any and all means, to any and every person who attempts to claim personal ownership of anything. This method, and this alone, can relieve the world of this infernal monster, the 'right of property.'"[45]

Sometimes this prospect introduced an apocalyptic or millennialist aspiration. Franklin Kyrilach urged, "Away with it [property]: tear it limb from limb, come down upon it like a hurricane, and sweep it from the face of the earth. Blow it into splinters with dynamite."[46]

The ultimate vision was that of simultaneous explosions all over the earth. Albert Parsons enthusiastically predicted, "A social revolution! One dynamite bomb! Pshaw. When the revolution comes there will be millions of dynamite bombs and they will flash and crash all over the civilized world simultaneously. That's what will happen."[47] And John Kelley claimed that "The effect of a bomb may be slight, but certainly a few tons of dynamite exploded in a heap would make a revolution. Gunpowder clears the air."[48]

[45] Quoted in Henry David, The Haymarket Affair, Russell, 1963.

[46] Alarm, 6 March 1886.

[47] Alarm, 19 November 1887.

[48] Alarm, 14 July 1888.

The language of some dynamite advocates conveyed an Old Testament quality, as though dynamite could be used to usher in a proletarian Judgment Day:

The savage blinding light of explosions begins to light up its dreams. Property trembles and cracks under the deafening blows of dynamite, the palaces of stone, where are accumulated the riches stolen from the workers, crack open providing a breach through which will pour the waves of poor and starving.[49]

The notion that dynamite could open a "breach" places the thinker more within the traditions of millenarianism than of anarchism.

These visions reflect little or no concern for using dynamite as an instrument for getting attention to demands, or for compelling the system to adopt reforms. They view dynamite as a weapon for absolute destruction and annihilation. Some terrorists and anarchists seemed to revere dynamite precisely because, unlike any other weapon then available, it seemed to provide that capability against any victim or target. No number of knives, guns, poisons, or other conventional instruments of terror and assassination could offer this; dynamite alone exposed the very foundations of the state to total extinction. Such wishes for total destruction and millennial redemption appear to have been more widespread in Europe than in America, where anarchists tended to advocate dynamite for limited purposes and specific targets.

[49] Longoni, p. 149.

III. IMPLICATIONS FOR POSSIBLE FUTURE NUCLEAR MILLENIALISM

In this Note, we have sought to identify elements of the mindsets of nineteenth century dynamite terrorists, on the assumption that this may give us some insights into the mindsets of possible future nuclear terrorists. Today, dynamite seems puny and precise compared to nuclear explosive devices. But this difference in physical capabilities does not invalidate the analogy. To the nineteenth century terrorists, dynamite was an extraordinarily powerful high-technology explosive, eminently suitable for arousing terrible fear and alarm among the elite. Some nihilists apparently even believed dynamite could level cities and usher in a political apocalypse. As the premier explosive of its time, dynamite was used to assassinate individuals, murder large numbers of people who represented a particular class or group, attack institutions, and perpetrate hoaxes designed to unnerve the authorities. And indeed, government authorities and security agents feared that dynamite-wielding fanatics might literally destroy the foundations of political and economic order.

THE NATURE OF SUPER-EXPLOSIVE POWER

Dynamite's physical properties were insufficient to account for the power that made dynamite appealing to some nineteenth century terrorists. It was important, and perhaps politically and psychologically necessary, for them to endow dynamite's power with broader theoretical and philosophical meanings. The following implied powers played a role in the past and may be relevant for future terrorism:

- o Super-explosives were interpreted to represent "power to the people," for use against the state. The state used raw power and violence against the people--so they should do likewise in return. Man's historical progress, some terrorists argued, was based ultimately on the people's resort to the latest instruments of violence.
- o Super-explosives represented scientific power. To some terrorists, it seemed proper for science to enable man to unleash the forces of nature against the state. They believed that the highest form of revolutionary terror should utilize the most advanced science and technology of the time.
- o Super-explosive terrorism represented a moral form of power because it elevated violence above the level of common criminality. The dynamite terrorist could express his message more clearly and carry his struggle into a new, more advanced stage. Conventional weapons might be easier to use, but they aroused conventional prejudices and lacked grandeur.
- o Super-explosives were claimed to constitute a humane form of power. Since the state was the real source of inhumanity and immorality, according to some terrorists, the quicker it was destroyed, the better for humanity--even though some people were killed or harmed in the process.
- o Super-explosives were seen to impart a mystical, magical kind of power--useful at least to charm the audience, and perhaps to create an apocalyptic breakthrough to a new millenium.

Some of these notions might be appealing for a present-day terrorist who wants to justify using nuclear power. We cannot estimate what different combinations of objectives and motivations might occur or how these might influence the terrorists' actions, because our data base does not enable us to identify attribute combinations even for the dynamiters. But our tentative speculation would be that the most dangerous combination would mix all the themes.

It may seem unlikely that future terrorists would interpret the use of nuclear threats as a way to wield power on behalf of the people. Yet, just as political philosophers have traditionally treated coercive power as the ultimate basis of the state, terrorists have rationalized high-technology violence as the best way to counter and combat that coercive power, claiming that they were promoting "power to the people." The evidence for this tendency in the history of dynamite terrorism suggests that some future extremists, perhaps motivated by political radicalism or ethnic nationalism, might endeavor to create respect and legitimacy for their cause by threatening nuclear violence. The possible future availability of small nuclear weapons could facilitate the adoption of such rationalizations.

Many terrorists, particularly those who were scientists by education or occupation, revered dynamite because it represented the latest achievement of science and technology. To them, dynamite symbolized an aspiration to comprise an ultramodern vanguard which could rely more on "science" than on the "people" for achieving radical change. Since nuclear power represents an even more advanced technology than did dynamite, it could appeal to terrorists (some of whom might emerge from

within scientific communities) who were interested more in wielding "scientific power" than in promoting "power to the people."

There is also a very different possibility. Secular and scientific ideas dominated revolutionary and terrorist thought in Western countries in the late nineteenth century; mystical and millennialist notions were less prevalent. However, the late twentieth century may be marked by a decline in secular and scientific ideas and by a new attraction to mystical and millennialist views. This possibility is indicated by several trends, including the increased influence of Eastern philosophies in the Western world, the continued questioning of scientific rationalism, spreading beliefs that the world is irrational, and the growth of religious and mystical cults. Should such trends continue, future terrorists may become more inclined to endow themselves with mystical powers through the threat of nuclear apocalypse. Science and mysticism, far from being contradictory, may blend quite readily in some mindsets.

THE USES OF SUPER-EXPLOSIVE POWER

The objectives of dynamite terrorism were as varied as the interpretations of its power. The following were recurrent themes among the early advocates of super-explosive terrorism:

- o Super-explosives were useful for attracting attention to demands, while simultaneously publicizing the identity and ideals of the perpetrators. The threat of super-explosives served to "educate" the people as well as to compel authorities to acquiesce.

- o Super-explosives were deployed to avenge unjust acts. Some terrorists saw the guilty--whether an individual, class, institution, or the "system"--as deserving the worst possible punishment for evil behavior. To them, this kind of violence should not be indiscriminate; it should retaliate for specific wrongdoing.
- o The use of super-explosives was justified as an instrument for self-defense, whereby the weak (e.g., the people, an ethnic minority, the workers) could prevent further exploitation and oppression by the state.
- o Super-explosives were sometimes regarded as an offensive weapon for introducing sweeping reforms in a "system." The inability of the system to reform through conventional means justified the resort to super-explosive terror.
- o Super-explosives held special attraction for some terrorists whose grandiose aim was to eradicate the existing social order--a goal that might require the leveling of all institutions of state and property--or to create an apocalyptic breakthrough to a new millennial redemption.

These themes occurred in various combinations. For example, some who used super-explosive terror to attract attention also wished to radically reform the existing political institutions. However, the themes of radical reformism and anarchic or millennial destruction were mutually exclusive. The most dangerous thematic combination may have mixed vengeful punishment with millennial destruction.

Historical analogy suggests that we should expect similar patterns and variations to accompany the possible emergence of nuclear terrorism--especially if miniaturized nuclear devices ever become available. Nuclear power may appeal to terrorists who crave attention to their demands or who wish to wreak vengeful punishment against specific targets. It is difficult to imagine nuclear devices being advocated for defending the interests of the workers--although their place might conceivably be taken by ethnic nationalists, religious cultists, or even environmental extremists in this analogy. It is also difficult to suppose that future terrorists would adopt nuclear force to compel major social reforms, as a more effective alternative to the ballot. But the threat of nuclear terrorism might be exploited to create political disruption while leveling radical demands at the authorities. A future nuclear terrorist might conceivably demand that a presidential election be halted or that a specific candidate be withdrawn from contention.

At a minimum, dynamite threats secured immediate attention from the authorities, if not from the public at large. However, the most dangerous dynamite terrorists craved more than mere publicity. Some terrorists and anarchists simply saw dynamite as a scientific weapon for destruction--an explosive that offered the capability to literally eradicate or annihilate the enemy. The fact that some anarchists of the late nineteenth century viewed dynamite as the instrument for annihilating the established order reinforces a contemporary concern: that future terrorists will see the nuclear bomb as the instrument for blasting through to a revolutionary new millenium.

DIVERSE TACTICS

Just as dynamite terrorism encompassed diverse tactics, we would expect a similar pattern in nuclear terrorism. Dynamite was used for individual or group assassinations, in labor and industrial strife, for symbolic bombings, for institutional bombings, for extortion, and for hoaxes. These could have been accomplished by more conventional means, but dynamite held special appeal because of the kinds of powers discussed above.

Some terrorists threatened to use dynamite to level cities--although these threats never materialized. We found no mention of incidents in which dynamite terrorists explicitly threatened random mass murder, but there were instances (e.g., a cafe bombing) in which representatives of a particular sector were targeted en masse. And some of the more grandiose and millennialist scenarios for destruction implied some random deaths.

For nuclear terrorist threats to follow a similar pattern would require the availability of small weapons that could be deployed selectively against small targets. Otherwise, hoaxes, extortions, and millennialist threats would seem most likely--although a terrorist attempt to annihilate a limited area (e.g., Wall Street) should not be discarded from the realm of speculation. Whereas the threat potential and the tactical applications of dynamite were often greatly exaggerated by both the terrorists and the defenders, nuclear terrorism could indeed have disastrous, even apocalyptic, results.

HOW A NUCLEAR TERRORIST GROUP MIGHT BE FORMED: TWO POSSIBLE MODELS

We have not delved deeply enough into the history of dynamite anarchism to understand how groups dedicated to extreme violence come into being; thus we cannot suggest from historical analogs how nuclear terrorist groups might take form. Nonetheless, we would speculate that two models seem possible.

The first model would be that of a nuclear terrorist group emerging from a conventional terrorist group. The decline and failure of a conventional terrorist group might lead to such desperation and divisiveness among its members that a nuclear-prone minority would coalesce to form a new group (or capture control of the old organization). In this model, the nuclear-prone minority could favor nuclear terrorism--whether for extortionist, apocalyptic, or other purposes--on the grounds that the failure of the original group derived from insufficient militance and violence against an increasingly oppressive state. The larger the original group, the more possibilities exist for this model to apply--the decline of conventional terrorist groups under police and public pressure could lead to a few small and extremely violent splinter factions. In a metaphysical depiction, the model implies a nuclear Phoenix rising from the ashes of the original conventional terrorist group.

The second model would be that of a nuclear terrorist group forming from fresh recruits. The group would be entirely new, although some of its members might come from groups such as religious cults, ideological movements, or ethno-nationalist sects. The terrorism would be nuclear from the beginning--whether for extortionist, apocalyptic, or other

purposes. The metaphor to characterize this model could be that of a nuclear Prometheus bringing fire from heaven to an unholy world.

In either model, the most dangerous outcome would be for the new group to have an apocalyptic or millenarian cast. In the first model, conversion to nuclear millenarianism could occur in response to the disaster perceived to have befallen the original group. In the second model, nuclear millenarianism could dominate if the charismatic leader or the membership came from religious cults that were already infused with millennialist thinking.

RAND/N-1610-SL