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NUCLEAR TERRORISM AND REALITY

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1. INTRODUCTION

NBC's recent television movie *Special Bulletin* mistakenly overemphasized the importance of media coverage to nuclear terrorism while obscuring the true magnitude of nuclear terrorism's threat to national security. Executive Producer Don Ohlmeyer chose to present an unrealistic depiction both of how nuclear terrorism would probably be conducted and of how the United States might respond to such an event. In *Special Bulletin* the bomb does explode, Charleston does get razed, a half-dozen National Emergency Search Team (NEST) technicians do get killed, but most of the population of Charleston is successfully evacuated before the bomb explodes and some scant days later America is portrayed as functioning as if nothing had happened at all. That is unrealistic and dangerously inaccurate. With or without media participation, the destruction of a major American city by a terrorist nuclear explosive would rock that country and the industrialized world in general. There really is no justification for *Special Bulletin's* generally optimistic more-or-less happy ending.

2. THE MEDIA DOES NOT PLAY AN IMPORTANT ROLE IN NUCLEAR TERRORISM

Unlike conventional terrorist violence, *bona-fide* nuclear terrorism[1] is a self-publicizing phenomenon. Without media coverage, conventional terrorist violence has an impact only on those it injures, those few bystanders who witness the violence and those few others who learn of the incident by word of mouth. Unlike the intimacy of a letter bomb or the inherently personal nature of a gun shot or even the fraternality of a hand grenade thrown into a crowded restaurant, the explosion of a nuclear weapon in a major American city is an inherently public event. It is a public event by the very nature of the scope of its impact: a nuclear explosion kills so very many people and would be witnessed by so very many more that there is no way it could help but be a public event. Like the coming of the Messiah or the collision of the earth with another

[1] *Bona-fide* nuclear terrorism is nuclear terrorism conducted by an individual or group actually having control over the detonation of one or more nuclear devices; distinguish *bona-fide* nuclear terrorism from baseless threats of nuclear attack made by parties without control of a nuclear device which might otherwise also properly be called "nuclear terrorism."

planet, a nuclear explosion in a major city needs media coverage the way a blind man needs bifocals. A nuclear explosion would obtain and hold public interest and attention quite nicely without the service of a public relations expert or the attention of a television news crew.

An insurgent nuclear explosion tacitly conveys a highly emotional message: no matter who you are, no matter where you live, no matter how much your country spends on its defense, you too could be annihilated by a terrorist nuclear weapon and there is virtually nothing you can do to avoid that. Nuclear weapons are non-denominational and non-discriminatory, unswayed by implorations and unmoved by imprecations. You cannot bargain with a nuclear bomb, you cannot intimidate a nuclear bomb and you cannot coerce a nuclear bomb. You can only attempt to manipulate the person(s) behind the nuclear explosive, and if that person or persons cannot be identified, there is nothing which can be done.

A nuclear explosion initiated by an unknown entity is in many ways the ultimate shadowy and threatening symbol. Apocalyptic and catastrophically destructive with the underlying threat of a lingering death for those who do survive the initial horror, a nuclear explosion is the ideal instrument of mass terror. In many ways, the greater the uncertainty and the less media coverage a nuclear terrorist receives, the greater the terror an insurgent nuclear explosion would create in the population at large. Yet, if the terrorists do receive media coverage, the fear engendered by the true magnitude of the threat posed by nuclear terrorism would probably roughly equal the fear of the unknown which would dominate without media coverage. Media coverage of nuclear terrorism can change the type of fear produced by nuclear terrorism, however it cannot be said to either substantially aggravate or substantially alleviate nuclear insurgency's general ability to terrorize the public at large. Media coverage is just not a very important consideration in cases of *bona-fide* nuclear terrorism.

3. THERE WILL BE NO WARNING OF AN IMPENDING NUCLEAR BLAST

Media coverage of nuclear terrorism is likely to be a very chancy thing since bona-fide nuclear terrorists[2] would not inform authorities that a nuclear device is about to be detonated. Since this assumption runs contrary to the fundamental assumption of literally every nuclear terrorism scenario, that is, the assumption that nuclear terrorists would use the threat of a nuclear detonation to obtain leverage in negotiations with authorities, it is worth taking a look at why rational *bona-fide* nuclear terrorists would not announce an imminent nuclear explosion.

Quite simply, rational nuclear insurgents would not announce an imminent nuclear explosion because they would gain nothing by doing so. In fact, since advance warning of an impending nuclear explosion is of

[2] For an excellent discussion of terrorist characteristics, including the likelihood that terrorists would in fact be rational, see Neil C. Livingstone's *The War Against Terrorism,* Lexington Books, Lexington MA: 1982, pages 31-33.

primary importance in determining the maximum potential effectiveness of any response to such an event, rational nuclear insurgents would actually strive at all costs to avoid even the mere suspicion by authorities that a nuclear explosion might occur at some time in the future. If insurgents provide a warning long before the explosion is to occur, the nuclear explosive may be located and safely neutralized[3] before it can be detonated, or actions can be taken to mitigate the effects of the explosion on the target or targets. The announcement-to-detonation delay provides a crucial opportunity for mobilization and deployment of response forces. In *Special Bulletin* this delay period was exploited to effect the evacuation of Charleston and was used to stage the attack on the insurgent weapon site by the commando team. In reality, authorities would not be given any such respite, they would not be given the chance to stage such an assault upon the weapons emplacement location, in fact, they would not even know that the weapon existed until it had been detonated.

Insurgents who actually control a nuclear capability have a bilateral credibility problem. On the one hand, even the mere suspicion that malevolent actors may be developing a nuclear capability may be sufficient to induce the mobilization of radiological detection and weapon neutralization teams; however, on the other hand, it may require an actual demonstration detonation for the insurgents to achieve determinative credibility sufficient to allow them to dictate state policies. While government officials may implement precautionary measures against (what they perceive to be) the rare chance that an insurgent nuclear weapon actually exists, until the insurgents have shown that they have the capacity to produce high-yield nuclear explosives and the will to use them against major population concentrations, officials certainly will not agree to any substantive terrorist demands. Having never previously suffered a *bona-fide* incident of nuclear terrorism, but having endured scores of baseless nuclear hoaxes, authorities will quite naturally be highly skeptical of insurgent claims that a nuclear explosion will occur unless their demands are met. Until a non-state improvised nuclear weapon has actually been detonated by some party, insurgents will find it nearly (if not totally) impossible to use nuclear weapons as an effective instrument of coercion or extortion. Explosion of at least one nuclear weapon is, therefore, a condition precedent which must be satisfied before non-state nuclear weapons (or the threat of non-state nuclear weapons) can effectively be used to blackmail a major state.

4. NUCLEAR WEAPON USE: EXTORTION OR DIRECT POLICY IMPLEMENTATION?

Alternatively, insurgents can use nuclear weapons as direct instruments of policy implementation. The difference between using a nuclear explosive to blackmail a state and the use of a nuclear weapon to directly implement policy is analogous to the difference between kidnapping and assassination. For a kidnapping

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[3] Because of the almost certain presence of anti-tamper mechanisms, it is expected that any neutralization effort will probably use either shaped charges or high energy lasers to dismantle the weapon without inducing a nuclear detonation.

to be successful, kidnappers require the cooperation of those who value the one who is kidnapped. If an executive's company or a child's parents refuse to raise the ransom demanded, the kidnapping is essentially futile and a failure. Assassination, however, does not require the cooperation of its victim to be successful. An individual can be killed despite the most diligent and adamant efforts to prevent such an event. Similarly, nuclear terrorists attempting to use an improvised nuclear explosive device in a "classic"[4] nuclear blackmail scenario require cooperation from the authorities in order to succeed, while nuclear terrorists using their nuclear explosive as an instrument of direct policy implementation can succeed without any cooperation or even acknowledgement or recognition by their target. Insurgent nuclear capabilities then become part of a wider range of insurgent operational capabilities, complementing and enhancing the normal range of non-nuclear insurgent unconventional warfare operations when and where particular circumstances are uniquely well suited to the employment of nuclear weapons. Rather than threatening to blow up a government unless that government agrees to meet terrorist demands, if insurgents were using their nuclear weapon as a direct instrument of policy implementation, they would simply remove any governmental entity hindering achievement of their objectives. If insurgents want the United States to stop producing nuclear weapons for example, rather than futilely attempting to pressure the United States into doing so, insurgents would simply use their own nuclear weapon to destroy major American nuclear weapon production facilities, thereby directly achieving their goal.

The use of nuclear weapons as direct policy implementation tools is not ideal, however. That strategy has the disadvantage that it cannot compel affirmative acts — you cannot use a nuclear weapon to make someone do something. A nuclear weapon cannot induce hypnotic obedience nor automaton-like unthinking compliance ... a nuclear weapon can be used in only two ways: in a nuclear blackmail scenario in an attempt to intimidate an entity into accepting some prescription (however the target of that coercive effort does not have to necessarily succumb to that suasion), or it can be used to eliminate opposition or bring about policy implementation by destruction of that which hinders or impedes attainment of the insurgent policy objectives. A nuclear weapon can force inaction (through physical destruction of a person, group, or government body), but it cannot force action; even under threat of a nuclear detonation, people still have free will and the capacity to refuse to act.

Of the two options, using nuclear weapons as a means of blackmailing governments, or using nuclear weapons as a tool with which to directly implement policy, the second option is, without a doubt, far more practical. While the spectre of incineration of a states's cities with nuclear weapons is an extremely strong coercive stimulus, it can be said with some certainty that there would no doubt be at least some policy makers with

[4] The classic nuclear blackmail scenario which has evolved over many years envisions a small team of terrorists fabricating an improvised nuclear explosive device from stolen strategic nuclear materials and then using that weapon for leverage in negotiations with authorities, threatening to destroy a major city unless their demands are met.

the will to resist its impetus, just as heads of state do not currently succumb to threats of assassination. Virtually all customary extortion demands (such as cash payments, release of prisoners, publication of admissions of culpability, etc.) can be coerced from authorities with non-nuclear threats. Threatening to blow up an airliner or threatening to execute hostages in an embassy is more than sufficient to coerce the desired response in most cases. When threats to blow up an airplane or threats to kill hostages prove insufficient, it is generally because a government feels there that there is no way that they can concede to a particular insurgent demand (or set of demands) under any condition (including threat of nuclear holocaust) while still remaining a recognizable semblance of what they once were. That is, if a state can, you don't need a nuclear weapon to force it to actually do so; if a state can't, introducing a nuclear weapon won't change anything. This was the situation in *Special Bulletin*: the United States government felt that there was no way that they could afford to hand over the demanded nuclear weapon "detonator modules," even under threat of a nuclear explosion. There is a certain logic to this; one can never be sure just what the yield of a particular nuclear weapon will be, especially the yield of an improvised device. If it is small, and many experts expect that an improvised nuclear explosive would indeed have only a comparatively small yield, a state might be better off trying to ride out the destruction produced by such a device rather than blithely going along with the certain metamorphosis that would be caused by acceding to what would no doubt be extreme insurgent demands. This seems to be current American policy.

However, it is eminently reasonable at this point to assume that insurgents do have the capability of producing high yield — even megaton yield — nuclear weapons.[5] Fully all of the critical nuclear weapon design and fabrication information unique and essential to thermonuclear weapon conception and production is now publicly available. The supplementary material requirements necessary to convert a fusion-boosted fission explosive into a thermonuclear device are, with but few minor exceptions, non-nuclear and non-explosive, and there is no reason why the vast majority of the secondary system (the apparatus which converts a low yield fission bomb into a high yield fusion bomb) cannot be let for commercial production in a contract job shop. Because the key to thermonuclear weapon production is procurement of sufficient fissionable material for use in the fusion boosted fission device (which is the thermonuclear weapon's trigger) and for use in the thermonuclear weapon's "spark plug," if one accepts the fact that insurgent production of any nuclear weapon is a possibility, one is also forced to consider the distinct possibility that insurgents may elect to expend the extra effort and attempt to produce a thermonuclear weapon rather than a "mere" fission weapon.

Of course, the probable ability of insurgents to produce megaton-range nuclear weapons is quite significant. An underlying tacit assumption of the current U.S. nuclear-terrorism response policy is that if the worst

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5 For a discussion of the logistics of thermonuclear insurgency, see ' "The H-Bomb Secret" Reconsidered' by this author, to be published in *Strategic Studies,* the quarterly journal of the Institute of Strategic Studies, Islamabad, Pakistan. [See Volume VII, Number 4, Summer 1984, pages 66-92.]

comes to the worst, society can soak up the worst that terrorists can dish out and still survive in a culture reasonably approximating that which existed before the insurgent nuclear explosion. That is, in many ways, the underlying theme of the end of *Special Bulletin*. The crucial assumption is that society can soak up the worst that terrorists can hit us with; that we can lose Charleston at the beginning of the week and be almost unaware of that catastrophe at the end of the week.

If insurgents are only able to produce kiloton-range weapons, the assumption that society may be able to soak up that non-state nuclear destruction may be a sound one. But, if insurgents can command thermonuclear firepower, the targeted state may very well not be able to withstand the assault upon it. Detonation of a ten-megaton weapon, for example, would produce, as a minimum, a significant hazard zone of some two thousand six hundred and forty square miles — a circular region with a radius of about twenty-nine miles from ground zero.[6] Keep in mind that that figure does not fully encompass the widely variable, but always serious contaminative effects of fallout from the burst. Of course, in some respects the discussion of likely terrorist weapon yields is moot since significant skepticism still exists about the ability of insurgents to produce any kind of improvised nuclear weapon whatsoever, at least in the minds of some strategically placed government officials. Therefore, my earlier comment about the impracticality of using nuclear weapons in attempts to blackmail governments must be reaffirmed; unfortunately states may be risking more than they realize when they both discount the possible effects of *bona-fide* nuclear terrorism and base their response strategies on unrealistic nuclear "blackmail" scenarios. Nuclear blackmail is not practical, but using improvised nuclear weapons to directly implement policy is. The authorities would not even have the chance to respond before the weapon is detonated, and afterwards the devastation would be incomprehensibly vast. Detonation of an improvised nuclear weapon in any American city, with or without media coverage, is not something which would be forgotten within a week of its occurrence. We would be a nation reduced to repeating Marlon Brando's line from *Apocalypse Now*, "The horror, the horror."

[6] Estimate based upon U.S. Army Field Manual FM 3-22, Fallout Prediction.