Center for the Study of Weapons of Mass Destruction

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Defining "Weapons of Mass Destruction"

by W. Seth Carus

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Center for the Study of Weapons of Mass Destruction

National Defense University

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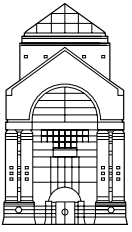

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Defining "Weapons of Mass Destruction"

Introduction

> *"When I use a word," Humpty Dumpty said in rather a scornful tone, "It means just what I choose it to mean—neither more or less." "The question is," said Alice, "whether you can make words mean so many different things." "The question is," said Humpty Dumpty, "which is to be master—that's all."*
> —*Lewis Carroll,* Through the Looking Glass

In January 2005, Secretary of Defense Donald Rumsfeld directed that U.S. Strategic Command become "the lead combatant commander for integrating and synchronizing DOD [Department of Defense] in combating WMD [weapons of mass destruction]."[1] This assignment was in response to the White House's December 2002 *National Strategy to Combat Weapons of Mass Destruction*.[2]

The Secretary's memorandum, however, raised a thorny definitional problem with clear bureaucratic implications: what *are* weapons of mass destruction? Unfortunately, that is not an easily answered question. There are numerous definitions of WMD with some official or semi-official standing (more than 40 are identified in this paper), although most are variations of 1 of 5 basic definitions. In fact, even DOD has adopted alternative and fundamentally inconsistent definitions, including some different from the one used by the White House in its strategy and policy documents.

Depending on the definition adopted, the scope of the combating WMD mission could change substantially. Hence, selecting an appropriate definition was a critical step in determining the appropriate range of the responsibilities assigned to Strategic Command.

This paper explores the issue of defining *weapons of mass destruction*. To give historical context for the rest of the paper, the first several sections summarize how the term has been used in disarmament negotiations, U.S. national security policy, Soviet and Russian military doctrine, and American political discourse. Next, the paper identifies alternative definitions for WMD, addresses some of the key policy issues associated with different definitions, and proposes a definition appropriate for the Department of Defense. The following sections expand upon the use of the term throughout recent history, from its first appearance in 1937 through developments after World War II and subsequent international negotiations. Finally, the conclusion provides some suggestions for future use of the term within the U.S. Government.

Words of Mass Distraction

The problem associated with defining WMD starts with a widespread perception that there is no accepted definition for the term and that it means whatever the user wants it to mean.

> The phrase "weapons of mass destruction" . . . is an amorphous one, changing meaning according to the whims of the speaker. Raising the specter of WMD is more a way by which politicians assign blame or take a stand on seemingly objective moral standards than a way by which they assess a particular weapons system.[3]

Others find fault with existing definitions and offer new definitions that differ in some radical way from those commonly accepted.[4] Still others, believing that the traditional definitions for WMD are intellectually problematic, propose to drop the term altogether.[5]

This paper adopts a different position. Contrary to the views of many pundits, there are authoritative definitions specifying the meaning of WMD. Moreover, it is impossible to drop the term or arbitrarily adopt an alternative definition. *WMD* is an inseparable component of the disarmament lexicon because it appears in several arms control treaties. As such, it has the precise meaning adopted by the negotiators of the treaties.

The term has a precise meaning in other significant contexts as well. It appears in authoritative national security policy documents issued by the White House since the early 1990s. Similarly, the Soviets used the term in their military doctrine starting in the late 1950s, and it still retains a place in Russian military doctrine.

Finally, the term has become an integral part of American political discourse. As a result, it is probably no longer possible to abandon the term, even if other factors did not militate against such an effort.

As will become clear, the supposed amorphousness of the term WMD has less to do with any lack of clarity than with the almost universal lack of familiarity with the history of its origins and use. From this perspective, a better definition is unnecessary. What is essential is a better understanding of the existing ones.

Disarmament Negotiations

The term WMD first appeared—as far as can be determined—in December 1937 in an address given by the Archbishop of Canterbury.[6] Modern usage, however, actually dates to 1945, with the insertion of the

words "weapons adaptable to mass destruction" in a document signed by President Harry Truman.[7] Subsequently, that phrase appeared in the first resolution passed by the United Nations (UN) General Assembly.[8] Within a few years, an alternate form, "weapons of mass destruction," became the preferred usage. As such, the term became an integral part of the lexicon of post–World War II disarmament diplomacy. Not surprisingly, the UN adopted a standard definition in 1948:

> [WMD are] . . . atomic explosive weapons, radio active material weapons, lethal chemical and biological weapons, and any weapons developed in the future which have characteristics comparable in destructive effect to those of the atomic bomb or other weapons mentioned above.[9]

Subsequently, the United States became a party to three treaties that refer directly to control of "weapons of mass destruction" (the Outer Space Treaty, the Seabed Treaty, and the Strategic Arms Reduction Treaty), in addition to those agreements that limit specific types of WMD (such as the Nuclear Nonproliferation Treaty, the Biological Weapons Convention, and the Chemical Weapons Convention).[10] Given that these treaties impose specific obligations on the United States and other adherents to them, it is inconceivable that treaty negotiators thought that WMD was an amorphous term that could mean whatever anyone wanted it to mean. The United States adopted the UN definition above for use in these negotiations.[11]

U.S. National Security Policy

WMD also assumed growing importance in the United States as a term of art in the policy arena after the end of the Cold War. The first sentence in National Security Directive 70 ("United States Nonproliferation Policy"), signed by President George H.W. Bush on July 10, 1992, asserts, "The spread of the capability to produce or acquire weapons of mass destruction and the means to deliver them constitutes a continuing threat to U.S. national security interests."[12] His successor, President Bill Clinton, was even more comfortable with the term, as is evident from the frequent references to WMD in his speeches and official documents. *WMD* appears 31 times in the Clinton administration's 1998 *National Security Strategy of the United States of America* and 33 times in its 1999 revision.[13] The administration of President George W. Bush follows this trend: *weapons of mass destruction* or *WMD* appear 24 times in its 2002 National Security Strategy.[14]

Although the 2002 Combating WMD Strategy never explicitly defines WMD, the document clearly means nuclear, biological, and chemical (NBC) weapons when WMD is used: "Weapons of mass destruction (WMD)—nuclear, biological, and chemical—in the possession of hostile states and terrorists represent one of the greatest security challenges facing the United States."[15]

Significantly, this is the same meaning assigned to the term in official documents issued by the Clinton administration. President Clinton issued Executive Order 12938 ("Proliferation of Weapons of Mass Destruction") on November 12, 1994, which stated:

> the proliferation of nuclear, biological, and chemical weapons ("weapons of mass destruction") and of the means of delivering such weapons, constitutes an unusual and extraordinary threat to the national security, foreign policy, and economy of the United States, and hereby declare a national emergency to deal with that threat.

This Executive order remains in effect, renewed annually by Presidents Clinton and Bush.[16] Similarly, Presidential Decision Directive (PDD) 39, "U.S. Policy on Counterterrorism," issued June 21, 1995, by the National Security Council under the signature of President Clinton, includes a section discussing policy toward WMD that clearly equates WMD with NBC weapons:

> The United States shall give the highest priority to developing effective capabilities to detect, prevent, defeat and manage the consequences of nuclear, biological or chemical (NBC) materials or weapons use by terrorists.
>
> The acquisition of weapons of mass destruction by a terrorist group is unacceptable.[17]

Other documents issued by Presidents Bill Clinton and George W. Bush appear to follow this pattern.[18]

Soviet and Russian Military Doctrine

The term WMD has had significance in arenas other than disarmament diplomacy. Perhaps most importantly, the Soviet Union used it to define an element of its military doctrine. The Russian term for WMD (*Oruzhiye massovogo porazheniya*) means "Weapons used to inflict heavy casualties. They include nuclear, chemical, and bacteriological agents."[19] Unfortunately, no one has written a history of the use of the term *WMD* by the Soviets. This makes it difficult to understand why they adopted the

term and the role that it played in their military doctrine. The answer may lie in the comments given in a 1978 National Intelligence Estimate produced on Soviet chemical warfare doctrine: "The Soviets categorize chemical weapons—as they do nuclear and biological weapons—as 'weapons of mass destruction' whose initial use must be authorized at the highest political level."[20] This suggests that to the Soviets, WMD had a political character that made them different from other weapons. Whatever the case, the term was used by senior Soviet officials—civilian and military—starting in the 1950s and continued in use through the collapse of the Soviet Union.[21]

The term retains a place in Russian military doctrine. The 1993 Russian Federation Military Doctrine contained a lengthy discussion of nuclear weapons and "other types of weapons of mass destruction." The following comes after a discussion of Soviet nuclear policy:

> The Russian Federation's policy regarding other types of weapons of mass destruction consists of:
>
> - promoting the full implementation of the Convention on the Prohibition of the Development, Production, Stockpiling, and Use of Chemical Weapons and on their destruction and the maximum expansion of the parties to it;
> - ensuring compliance with the regime of the Convention on the Prohibition of the Development, Production, and Stockpiling of Bacteriological (Biological) and Toxic Weapons and on Their Destruction;
> - preventing the creation of new types of weapons of mass destruction and the development, production, stockpiling, acquisition, storage, or proliferation of means, materials, and technologies which help create these weapons;
> - maintaining readiness to counter effectively the consequences of the creation of new types of weapons of mass destruction and providing guarantees of the security of citizens, society, and state.[22]

This appears to follow the definition adopted by the United Nations. In addition to nuclear weapons, the Russians considered chemical and biological weapons to be WMD, as well as leaving open the possibility of "new types" of WMD.

The Russian Federation Military Doctrine, issued in April 2000, no longer has such a lengthy discussion of other types of WMD, but still uses the term five times. Its articulation of Russian nuclear doctrine includes the following use:

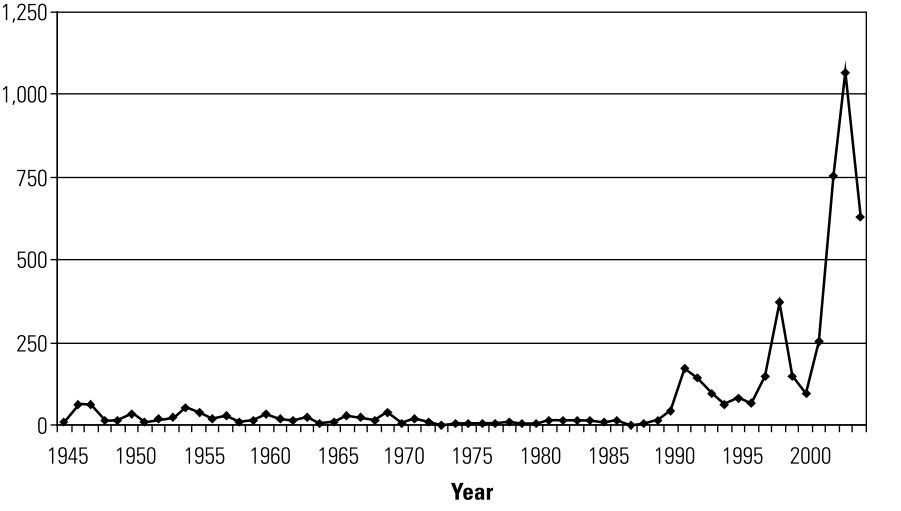
> The Russian Federation reserves the right to use nuclear weapons in response to the use of nuclear and other types of weapons of mass destruction against it and (or) its allies, as well as in response to large-scale aggression utilizing conventional weapons in situations critical to the national security of the Russian Federation.[23]

American Political Discourse

WMD also has long been a small but not insignificant part of the American political lexicon. Ten of the last eleven Presidents used the term in a public speech at least once.[24] The term has appeared in every Democratic Party platform since 1988 and in every Republican Party platform since 1992.[25] It earned a place on lists of the most used or overused phrases of 2002 and 2003.[26]

Its pattern of use in the *New York Times* over the years probably reflects accurately the growing saliency of the term in political discourse.[27] Except for 1973, at least one article in the newspaper used the term at least once a year from 1945 to 2005. *WMD* appeared in 1,069 stories in 2003 and 632 times in 2004. The frequency of use, however, varied widely over time, as is evident from a review of figure 1.[28]

Figure 1: Frequency of Articles Mentioning WMD in the *New York Times*, 1945–2004



Source: Lexis-Nexis, ProQuest Historical Newspapers, *The New York Times* (1851–2001). The tabulations also include mentions of the term *weapons adaptable to mass destruction*, which appeared a total of 46 times, almost all between 1945 and 1949.

Assessing the Alternative Definitions for DOD

Research for this paper identified more than 40 different definitions of WMD.[29] Some of the definitions with official standing are identified in appendix A (used in the U.S. executive branch), appendix B (enacted into U.S. Federal law), appendix C (versions used internationally), and appendix D (enacted into U.S. state laws). Almost all of the more than 40 definitions listed in the appendices fit into 1 of 5 alternative definitions, allowing for some slight variations in meaning.[30]

- WMD as a synonym for nuclear, biological, and chemical (NBC) weapons[31]
- WMD as chemical, biological, radiological, or nuclear (CBRN) weapons[32]
- WMD as CBRN and high explosive (CBRNE) weapons[33]
- WMD as weapons that cause massive destruction or kill large numbers of people, and do not necessarily include or exclude CBRN weapons[34]
- WMD as weapons of mass destruction or effect, potentially including CBRNE weapons and other means of causing massive disruption, such as cyberattacks.[35]

None of these definitions is perfect. All suffer from flaws, either conceptual or in the implications of their use to guide policy. DOD in particular faces the problem of having multiple definitions. In fact, it is possible to find variants of four of the five definitions in official DOD publications. The definition in the *DOD Dictionary of Military and Associated Terms*, issued by the Joint Staff, is supposedly *the* official definition and offers a version of the third definition (CBRNE).[36] In other contexts, DOD has adopted definitions that limit WMD to only NBC or CBRN weapons[37] (the first and second definitions), and the fifth definition uniquely belongs to the Joint Chiefs of Staff.

WMD as NBC

Background. Defining WMD to include nuclear, biological, and chemical weapons is a traditional meaning of the term. It is codified in the earliest definition for WMD that appears in U.S. law (see appendix B, definition 1) and is the meaning invariably assigned to the term in White House documents.

Pros. This definition has two significant positives. First, it is the definition used in the 2002 *National Strategy for Combating WMD*, which is the key policy document currently guiding executive branch activity in this arena. Moreover, it is consistent with White House usage

since at least 1994, suggesting that this meaning is not idiosyncratic to a particular administration.

Equally important, NBC weapons have been the focus of intense international disarmament negotiations, resulting in the 1925 Geneva Protocol, the 1970 Nuclear Nonproliferation Treaty, the 1972 Biological and Toxin Weapons Convention, and the 1993 Chemical Weapons Convention (CWC). As such, NBC weapons represent a group of weapons that the international community accepts as particularly abhorrent. This distinguishes them from other weapons, such as conventional munitions, that could cause massive death and destruction but that the international community traditionally accepted as routinely usable instruments of armed conflict.

Cons. There are at least two conceptual problems with this definition. First, not all chemical and biological weapons cause mass effects. Chemical and biological weapons can be highly discriminate, as evidenced by their use to assassinate. Moreover, biological and chemical agents generally do not cause destruction as usually defined, even if they may cause mass mortality. Second, NBC weapons are not the only types of weaponry that can inflict mass destruction. Conventional armaments used in sufficient quantity can cause effects equal to or greater than those of nuclear weapons, as demonstrated by the bombing raids on Dresden and Tokyo during World War II. Moreover, as recently demonstrated by the genocide in Rwanda, quite primitive weapons can cause mass casualties.

There are two significant policy objections to this definition. This definition varies slightly from the one adopted for international disarmament negotiations, neglecting to mention explicitly radiological weapons. It also is inconsistent with the one used by the homeland security and law enforcement communities.

DOD Perspective. This definition has saliency given its use by the White House in a series of key policy documents, especially the 2002 Combating WMD Strategy. If DOD wants to be consistent with Presidential guidance, it must follow this definition. It also appears useful in providing a clearly defined scope of action for a DOD mission.

WMD as CBRN

Background. This definition is the closest to the meaning used by the international community for international disarmament negotiations, as defined by a UN disarmament commission in 1948.[38] The United States accepted a version of this definition when it negotiated international treaties that placed restrictions specifically on "weapons of mass destruction."

In the view of some officials, however, this is only an extension or a variant of the first definition. Thus, some officials involved in drafting the 2002 Combating WMD Strategy claim that their reference to WMD included radiological weapons as a subset of nuclear weapons, despite the lack of explicit reference to radiological devices in the document.[39] From this perspective, the mention of nuclear weapons in the first definition (NBC) was shorthand for both nuclear and radiological weapons, making NBC and CBRN synonyms.

Pros. This definition makes explicit the addition of radiological weapons to the first definition. As such, it provides the closest fit to the 1948 definition offered by the UN Committee on Conventional Armaments, which was subsequently adopted by the UN General Assembly as the internationally recognized definition. This also suggests that this definition is sufficiently close to the first one to serve as a synonym for NBC and to be consistent with national guidance.

Cons. Most of the criticisms identified with the first definition—equating WMD with NBC weapons—apply here. This definition is inconsistent with the one used by the most significant of DOD domestic interagency partners and retains the conceptual weaknesses of the first definition. As an added negative, some people argue strongly that radiological weapons are not capable of mass destruction. Significantly, the international community has never negotiated a treaty prohibiting radiological weapons, despite the inclusion of such systems in the UN definition of WMD.

DOD Perspective. This was the official DOD definition before 1999 and is generally consistent with that used in disarmament negotiations. If treated as a variant of the first definition, it would be consistent with the Combating WMD Strategy. As with the first definition, it narrows the focus of activities encompassed by WMD in a manner useful for DOD in distinguishing mission space.

WMD as CBRNE

Background. Certain U.S. Government agencies, including the Joint Chiefs of Staff, Federal law enforcement officials, and some homeland security organizations, define WMD to include certain explosive devices in addition to CBRN weapons. This definition originated in a provision of the Violent Crime Control and Law Enforcement Act of 1994 (P.L. 103–322), an omnibus piece of legislation best known for its initiation of Federal funding for local police. Included in the bill was the Federal Death Penalty Act of 1994, which allowed Federal courts to impose the

death penalty for nearly 60 different crimes, including killing someone through WMD use.[40] That legislative definition was highly idiosyncratic (see appendix B, definition 4), including any "destructive devices as defined in section 921 of this title." Such destructive devices include bombs, grenades, mines, or any gun with a barrel larger than one-half inch.[41] As a result, Congress effectively declared that a wide range of conventional armaments were really WMD.

Federal prosecutors have relied extensively on this legislation during the past decade, typically using it to prosecute cases involving "destructive devices" and not CBRN weapons. Prosecutors indicted and convicted Timothy McVeigh and Terry Nichols for using WMD in their April 19, 1995, bombing attack on the Alfred P. Murrah Federal Building in Oklahoma City.[42] In that case, the WMD consisted of a large two- to three-ton ammonium nitrate truck bomb. Similarly, prosecutors indicted Zacarias Moussaoui for conspiring to use WMD, specifically "airplanes intended for use as missiles, bombs, and similar devices, and other weapons of mass destruction."[43] Richard Reid pled guilty to a charge of attempting to use WMD—trying to use a shoe bomb to destroy an aircraft.[44] Other prosecutions have involved possession of pipe bombs and sawed-off shotguns.[45] More appropriately, some prosecutions under this law have involved individuals who threatened to use chemical or biological agents, usually anthrax hoaxes.[46]

Nine states and the District of Columbia subsequently adopted laws treating explosive devices as WMD (see appendix D). The District of Columbia, Idaho, Ohio, and South Carolina drafted laws essentially duplicating the Federal legislation. Eight states adopted definitions that diverge from the one in 18 U.S.C. 2332a.[47]

Perhaps more significantly, Federal agencies with homeland security responsibilities sometimes rely on this definition. This is perhaps understandable, given the leading role assigned to the law enforcement community in terrorism response until the creation of the Department of Homeland Security (DHS).[48] DHS adopted a version of this definition for its December 2004 *National Response Plan*.[49]

Pros. This definition is the existing DOD definition.[50] More significantly, it corresponds closely to the one used by the Federal law enforcement community and in many contexts by homeland security agencies. In addition, this definition addresses some of the concerns of critics who contend that the most destructive and deadly weapons have been conventional.

Cons. This definition is inconsistent with national guidance and with the usage preferred by the Department of State and the international

community. In addition to incorporating chemical, biological, and radiological weapons that could be used in ways that do not cause mass destruction, this definition also includes a fifth category of weapons, high explosives, which rarely inflict mass destruction. This definition also may be difficult to operationalize, given the breadth of its coverage. Virtually the entire arsenal of a modern military force is WMD under this definition.[51] Given the international consensus that WMD are weapons that should be prohibited or controlled, widespread adoption of this definition would imply that international disarmament negotiations should ensure that most conventional military armaments should be prohibited or at least subjected to arms limitations.

DOD Perspective. This definition merits further consideration simply because it is the one used by key interagency partners. Thus, this would be the favored definition if the primary DOD objective was consistency with Federal homeland security and law enforcement agencies. On the other hand, this definition is the most problematic for other DOD interests. Adoption of this definition in disarmament negotiations, or for application to existing treaties, could result in controls on conventional armaments that DOD may not want to have limited by international agreement, such as antisatellite weapons or naval mines. Finally, it may be impossible to operationalize within a DOD setting. Most weapons used by the Armed Forces would be treated as WMD using this definition, suggesting that a combatant commander assigned the responsibility for combating WMD would essentially be in charge of dealing with the full range of adversary military forces.

WMD as Weapons Causing Mass Destruction

Background. This definition focuses not on specific types of weapons but rather on the magnitude of the impact. Although this rationale is the underlying basis for all WMD definitions, this usage differs from the preceding ones in one important respect. The first three definitions specify the types of weapons that are WMD (NBC or CBRN or CBRNE). Such weapons may or may not be WMD using this definition. Interestingly, this type of definition was adopted by the Central Intelligence Agency for its post–Operation *Iraqi Freedom* investigation of the Iraqi WMD programs:

> Weapons that are capable of a high order of destruction and/or being used in such a manner as to kill large numbers of people. Can be nuclear, chemical, biological, or radiological weapons but excludes the means of transporting or propelling

> the weapons where such means are a separable and divisible part of the weapon. Chemical Weapons and Biological Weapons need to be of a certain size to count as WMD—single chemical or biological artillery rounds would not be considered to be WMD, due to the limited damage they could produce.[52]

This definition is unique to the Iraq WMD investigation, and its merits are unclear. Some who advocate expanding the definition of WMD to include small arms and other conventional weaponry seem to advocate using a definition of this type.

The international community has never negotiated a disarmament agreement that bans WMD. Rather, it has chosen to impose geographic limitations on the location of WMD (outer space and the seabed) and has limited its prohibitions to specific categories of WMD, such as the treaties prohibiting chemical and biological weapons.[53] Hence, the Chemical Weapons Convention prohibits possession of any chemical agents, "except where intended for purposes not prohibited under this Convention," such as for use in developing defenses. Similarly, the Biological Weapons Convention (BWC) prohibits possession of biological agents "of types and in quantities that have no justification for prophylactic, protective or other peaceful purposes." It also bans any weapons "designed to use such agents or toxins for hostile purposes or in armed conflict."

While it is possible to possess chemical and biological agents and remain in compliance with international law, these agreements prohibit possession of even a single munition intended for hostile purposes. The rationale for relying on a zero tolerance standard is obvious: allowing possession of even small stocks of weapons for use in armed conflict would undermine verification because discovery of such weapons caches would not necessarily be proof of a violation.

Pros. This definition has the singular virtue that it starts with the primary meaning of the concept. As such, it has greater intellectual consistency than the others. It permits intellectually rigorous distinctions with types of weapons that only sometimes cause mass mortality (such as chemical and biological weapons). This definition inherently incorporates the provision of the UN definition that covers new types of WMD.

Cons. This definition is inconsistent with those used in national strategy documents and by the international community. Moreover, it may complicate response to the proliferation of NBC weapons by suggesting that as a practical matter the United States would be willing to tolerate possession of limited stockpiles of some CBRN weapons and would not

respond to use so long as the employment did not cross some threshold. In contrast, the United States until proven otherwise currently operates on the assumption that the presence of any chemical or biological weapons constitutes a violation of the CWC or BWC. This makes it harder for proliferating countries to break out of their treaty obligations.

As such, this definition raises significant verification issues. Do we have sufficient confidence in our intelligence to be certain that we would really know the size of an adversary CBRN arsenal? If we found a single device, would we be confident that no others exist? Moreover, this definition implies that we would ignore activities that lead to minimal capabilities but that we would seek to interdict or otherwise respond to activities that lead to CBRN activities consistent with mass destruction capabilities. Operationalizing such an approach would be extremely difficult.

DOD Perspective. This is the most intellectually pure definition but also potentially the hardest to operationalize. It is inconsistent with national guidance, the practice of disarmament negotiations, and the U.S. criminal code.

WMD as "Weapons of Mass Destruction or Effect"

Background. This is the most recent attempt to redefine WMD. It first appeared in the 2004 *National Military Strategy of the United States of America* issued by the Joint Chiefs of Staff.[54] That document contains the following reference to the *National Security Strategy of the United States of America* issued by the Bush administration in 2002:

> The NSS [National Security Strategy] directs an active strategy to counter transnational terrorist networks, rogue nations and aggressive states that possess or are working to gain weapons of mass destruction or effect (WMD/E).

A footnote at the end of the previous sentence defines WMD/E:

> The term WMD/E relates to a broad range of adversary capabilities that pose potentially devastating impacts. WMD/E includes chemical, biological, radiological, nuclear, and enhanced high explosive weapons as well as other, more asymmetrical "weapons." They may rely more on disruptive impact than destructive kinetic effects. For example, cyberattacks on U.S. commercial information systems or attacks against transportation networks may have a greater economic or psychological effect than a relatively small release of a lethal agent.

Whatever the merits of WMD/E as a concept, the available evidence does not support the assertion that it came out of the National Security

Strategy. The term *weapons of mass destruction* appears 13 times in the text of the September 2002 National Security Strategy, including 8 times in a chapter devoted specifically to the threat of WMD. The only association of the word *effects* with WMD occurs in the phrase "effects of weapons of mass destruction use," which appears three times in a paragraph discussing consequence management. While the National Security Strategy never explicitly defines WMD, the chapter on combating WMD focuses exclusively on nuclear, biological, and chemical weapons, and their associated delivery systems. Moreover, the WMD/E definition clearly is inconsistent with other uses of the term by the White House.

Pros. This is an attempt to address some of the deficiencies with other definitions, particularly those arising from terrorism concerns. It focuses on disruptive effects as well as necessary destruction and can include any attack that might have a significant impact on the target, whether real or virtual. This approach is particularly useful in the context of understanding the full range of terrorist threats, which can have devastating effects even if using weapons not traditionally defined as WMD.

Cons. WMD/E is a new term that is currently unique to the Joint Staff and does not appear to have gained traction outside the military. The Joint Staff has failed to make clear its rationale for adopting this term or to signal if it intends WMD/E as a replacement for WMD. Because the concept is nascent, it is unclear if it defines categories amenable to creating organizational frameworks. Moreover, it is unclear whether WMD/E includes *all* NBC weapons or only those capable of causing mass disruption. The breadth of the concept, and its dissimilarity to the use of WMD in strategy documents issued by the White House, suggests that it is poorly suited for use in supporting DOD implementation of Presidential guidance.

DOD Perspective. This revision of the traditional concept of WMD does not appear suited to address the issues that led the international community to focus on CBRN weapons as armaments of special concern. In addition, it may be the hardest to operationalize from a combatant commander's perspective. The types of adversary capabilities associated with this definition are wide ranging, suggesting that it may be hard to determine with particularity exactly what activities are associated with a combating WMD/E mission.

Selection Criteria for a DOD Definition

The requirement for a definition of WMD arises from the DOD decision to define combating WMD as a mission and to give the combatant

commands a new framework within which to address the challenges posed by the spread and potential use of WMD. As such, this new mission should be a focal point within DOD for implementation of the *National Strategy to Combat Weapons of Mass Destruction*, issued by the White House in 2002.

Clearly, to the extent that DOD is acting in the context of a national strategy, DOD should be consistent with the use of the term by the White House. Moreover, review of this National Strategy indicates that while some of its elements focus on activities naturally under the cognizance of the military, other elements are the primary responsibility of others. This suggests that DOD will need a definition acceptable to the agencies that it will be supporting.[55]

Arms control considerations should play a role in the DOD definition, if only because of the potential impact on the interests of the Defense Department. The United States is a party to treaties imposing constraints on weapons of mass destruction, which were negotiated using the official UN definition. Because these agreements impose legally binding obligations on the United States, a precise definition for WMD is essential. In this context, DOD may not want to adopt definitions that undermine the boundaries established during the treaty negotiations.

Of less significance (but still important) are other uses of WMD in disarmament negotiations. Several UN resolutions (from both the General Assembly and Security Council) articulate a consensus that WMD as a class of weapons should be prohibited and that disarmament negotiations aimed at WMD as a class of weapons should take precedence over the control of conventional munitions. The international community generally treats WMD as weapons that are particularly dangerous and hence has given priority to elimination or control of them over other types of armaments. This may be why some proponents of controls over conventional munitions want to expand or change the traditional definition of WMD to include conventional armaments.[56]

This context suggests that DOD cannot define WMD in a vacuum. Rather, the Defense Department must assess how its definition fits with usage in other contexts. In particular, DOD should pay attention to alternative usages that might have negative consequences for its interests. These issues include the following, not necessarily in priority order:

- DOD activities will occur in the context of a national strategy. This suggests that DOD should be consistent with White House guidance on the meaning of WMD. Maintaining consistency with Presidential directives is essential if DOD wants to assert that its activities implement a national strategy.

- DOD will need to operate in cooperation with other organizations that may have their own definitions of WMD.
  - Most importantly, DOD will implement its mission in cooperation with other U.S. Government agencies. This implies that DOD needs to understand alternative definitions for WMD that have standing in other communities. This is especially true when DOD may be acting in support of another agency with lead responsibility for a combating WMD activity.
  - DOD also will work with foreign and international organizations that may have their own definitions. It would be useful to synchronize a DOD definition with those of its non-U.S. partners.
- DOD should be sensitive to the potential intersection between its definition of WMD and the use of the term in international disarmament negotiations and treaties. In particular, DOD should be aware that its selection of a definition could have implications for its equities in the context of disarmament and arms control negotiations.
- DOD will use the definition to implement actions in the realm of combating WMD that should distinguish such activities from others undertaken by DOD in other areas of armed conflict. As such, it should serve internal DOD needs to differentiate between combating WMD and addressing other military challenges.
- The definition should take into account the unique characteristics of the weapons in question, the potentially unique response capabilities required to deal with them, and the impact of a definition on DOD organization and force structure.

Practically, some of these matters are more important than others. In particular, four of them are especially critical and can be operationalized to form the key criteria for selecting a definition:

- consistency with Presidential guidance (in particular, the *National Strategy for Combating WMD*)
- congruence with DOD long-term interests related to disarmament diplomacy. This criteria strongly supports adoption of a definition compatible with the one used by negotiators in international disarmament diplomacy, suggesting use of the second definition (*WMD = CBRNE*). To the extent that NBC = CBRNE, the first definition also would be acceptable. International adoption of the alternative definitions might lead to imposition of constraints on DOD use of weaponry that the United States could find unacceptable. Thus, DOD should avoid the last three definitions, and especially definition three (equating WMD with CBRNE), because adoption of those definitions for interpretation of U.S. treaty obligations could negatively impact U.S. interests.
- consistency with the position of key interagency partners (primarily law enforcement and homeland security agencies)

- utility in separating WMD-related matters from other issues of operational significance for DOD.

From a DOD perspective, it is important to adopt a definition that clearly differentiates WMD from the conventional armaments that are the primary instruments of the military's warfighting capabilities. CBRN weapons require specialized capabilities that are distinct from those required to deal with conventional munitions or other threats (such as cyberattacks). This expertise, often rare in the military, puts a considerable burden on what are currently high-demand/low-availability resources.

NBC weapons rely on effects that are often radically different from those associated with conventional munitions. Nuclear and radiological weapons are associated with radiation, chemical weapons with chemical toxicity, and biological weapons with disease. Responding to these challenges puts heavy responsibilities on communities (such as military medicine) that either do not have a role in conventional warfighting (radiation expertise, for example) or that are normally considered support services (as with medicine).

Clearly, none of the definitions is decisively superior to any of the others. Using the criteria identified at the start of the previous section, however, results in a focus on only three of the definitions: the first two (*WMD = NBC*; *WMD = CBRN*) and the third (*WMD = CBRNE*). The reasons for this particular focus come from the answers to the four key criteria identified at the start of the previous section:

- Consistency with Presidential guidance. The current administration and its immediate predecessor both clearly adopted the first definition (WMD = NBC). This is explicit in the Bush administration's Combating WMD Strategy.
- Congruence with DOD long-term interests related to disarmament diplomacy. This criterion strongly supports rejection of the last three definitions and suggests one of the first two definitions is preferable (NBC or CBRN) because of possible problems the third, fourth, and fifth definitions (particularly the third, equating WMD with CBRNE) could create for DOD in the arena of disarmament diplomacy.
- Consistency with the position of key interagency partners. Although DOD national security partners in the Interagency usually favor NBC, they have few operational concerns regarding this definition, while some homeland security and most law enforcement agencies are strongly wedded to the third definition (CBRNE).
- Utility for DOD in defining a distinct mission. This criterion is less helpful than the others. If the main concern is narrowing the scope of the associated activities to manageable proportions, then the first two definitions are best (NBC or CBRN). Similarly, if the primary focus

> of the effort is on traditional DOD warfighting activities, those definitions are probably most appropriate. However, if homeland security and cooperation with law enforcement agencies are the intended focus of the effort, then the more appropriate definition is the third definition (CBRNE).

This review tends to suggest that the best definition is probably one that equates WMD with NBC weapons but that CBRN is an acceptable alternative. The CBRNE definition is only acceptable if the intended focus of the new mission is homeland security and support to law enforcement and homeland security agencies.

This implies that DOD should revise its existing definitions of WMD to make them consistent with national guidance and international disarmament diplomacy. As such, it should probably revert to the official DOD definition used until 1999.

Disarmament Diplomacy

The first known use of the term *weapons of mass destruction* dates to the December 1937 Christmas address delivered by the Archbishop of Canterbury, William Cosmo Gordon Lang. During the course of his sermon, entitled "Christian Responsibility," the Archbishop stated:

> Take, for example, the question of peace. Who can think without dismay of the fears, jealousies, and suspicions which have compelled nations, our own among them, to pile up their armaments? Who can think at this present time without a sickening of the heart of the appalling slaughter, the suffering, the manifold misery brought by war to Spain and to China? Who can think without horror of what another widespread war would mean, waged as it would be with all the new *weapons of mass destruction* [emphasis added]?[57]

While the Archbishop's remarks gave no clear indication of what he meant by WMD, there is no particular reason to believe that he was thinking only of aerial bombardment and explosive weapons.[58] The reference to the wars in Spain and China certainly suggest that the Archbishop had concerns about the widely publicized bombing of cities during 1937 by the Fascists in Spain and the Japanese in China.[59] However, the Archbishop was gravely concerned about the dangers of chemical weapons, having addressed the subject during a Parliamentary debate following the initial reports of the 1936 Italian chemical attacks in Abyssinia.[60] Moreover, it is likely he was aware of concerns that a future European war would involve

chemical attacks on cities.[61] It is even possible that he could have known of public discussions in the 1920s and 1930s relating to the potential threat of bacteriological (meaning biological) warfare.[62]

Developments after World War II

There is no evidence to suggest that the Archbishop's address was responsible for subsequent uses of the term WMD. Rather, post–World War II use of the term clearly dates to November 15, 1945, when the President of the United States, the prime minister of the United Kingdom, and the prime minister of Canada issued a joint declaration calling for international control of atomic energy and advocating the creation of a UN commission to identify ways to bring atomic weaponry under control. Significantly, the declaration was not limited only to nuclear weapons:

> Nor can we ignore the possibility of the development of other weapons [besides atomic weapons], or of new methods of warfare, which may constitute as great a threat to civilization as the military use of atomic energy.
>
> . . .
>
> In particular the [proposed UN] Commission should make specific proposals:
>
> . . .
>
> (c) For the elimination from national armaments of atomic weapons and of all *other major weapons adaptable to mass destruction* [emphasis added].[63]

According to an explanation offered by a senior State Department official to a military colleague, "weapons adaptable to mass destruction" were mentioned due to concerns that if the commission considered only atomic weaponry, its "recommendations would be lop-sided if in fact there were other important weapons on which similar controls should be placed."[64]

The terminology in the tripartite declaration entered the lexicon of international disarmament diplomacy when it was incorporated into the first resolution adopted by the UN General Assembly (January 24, 1946), which established a "Commission to deal with the Problem Raised by the Discovery of Atomic Energy." That commission was directed to "make specific proposals . . . for the elimination from national armaments of atomic weapons and of all other *major weapons adaptable to mass destruction* [emphasis added]."[65] The deadlock over nuclear

weapons controls ensured that the UN Atomic Energy Commission never addressed the problem of "other major weapons adaptable to mass destruction."[66] As a result, it never clarified the General Assembly's resolution by defining the term.

The Commission for Conventional Armaments

In 1948, the UN Commission for Conventional Armaments (CCA) generated the first considered definition of WMD. The CCA was established in 1947 under the auspices of the Security Council in response to a recommendation contained in General Assembly Resolution 41(I).[67] That resolution, which recommended creation of such a committee, made three mentions of the need to eliminate or prohibit "atomic and all other major weapons adaptable now or in the future to mass destruction." The commission was directed to develop proposals for the reduction and regulation of armaments and armed forces but was told to exclude any matters that were the responsibility of the Atomic Energy Commission.

This meant that the CCA needed to determine what was within its mandate and what was more appropriately within the purview of the Atomic Energy Commission. An August 12, 1948, resolution of the CCA provided that guidance:

> The Commission for Conventional Armaments resolves to advise the Security Council: 1. that it considers that all armaments and armed forces, except atomic weapons and weapons of mass destruction, fall within its jurisdiction, and that weapons of mass destruction should be defined to include atomic explosive weapons, radio active material weapons, lethal chemical and biological weapons, and any weapons developed in the future which have characteristics comparable in destructive effect to those of the atomic bomb or other weapons mentioned above.[68]

Significantly, the Soviet Union voted against this resolution and blocked its submission to the Security Council in 1948.[69] The CCA definition essentially equated WMD to CBRN, although it mentions only lethal chemical and biological weapons and also incorporated unspecified weapons "developed in the future" having the "destructive effects" of the specified CBRN weapons.

In 1977, the UN General Assembly adopted Resolution 32/84, which formally accepted the CCA definition for use in disarmament diplomacy. According to that resolution, the General Assembly

> *reaffirms* the definition of weapons of mass destruction, contained in the resolution of the Commission for Conventional Armaments of 12 August 1948, which defined weapons of mass destruction as atomic explosive weapons, radioactive material weapons, lethal chemical and biological weapons and any weapons developed in the future which might have characteristics comparable in destructive effect to those of the atomic bomb or other weapons mentioned above.[70]

This resolution resulted from a 1975 Soviet proposal that the international community negotiate a treaty to prohibit the development and manufacture of all weapons of mass destruction.[71] General Assembly resolutions related to the "[p]rohibition of the development and manufacture of new types of weapons of mass destruction and new systems of such weapons" mentioned the CCA definition in 1996, 1999, and 2002.[72]

Treaties Controlling Weapons of Mass Destruction

The United States has adhered to at least three treaties that place limitations on weapons of mass destruction as a class (rather than specifically on nuclear, biological, or chemical weapons): the 1967 Outer Space Treaty, the 1972 Seabed Treaty, and the 1991 Strategic Arms Reduction Treaty. One additional treaty, the 1979 Moon Agreement, also contains language related to WMD, but the United States (and most of the international community) never accepted that agreement. Additionally, WMD appears in the preambles of at least three other treaties: the 1967 Treaty for the Prohibition of Nuclear Weapons in Latin America,[73] the 1972 Biological Weapons Convention,[74] and the 1993 Chemical Weapons Convention.[75] This contrasts with the 1970 Treaty on the Nonproliferation of Nuclear Weapons (NPT), which does not use the term.

Outer Space Treaty

The 1967 Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and Other Celestial Bodies (generally known as the Outer Space Treaty) prohibits placement of WMD in outer space.[76] The key language appears in Article IV:

> States Parties to the Treaty undertake not to place in orbit around the earth *any objects carrying nuclear weapons or any other kinds of weapons of mass destruction*, install such weapons on celestial bodies, or station such weapons in outer space in any other manner. [Emphasis added.]

The idea for a disarmament treaty focused on outer space originated during the Eisenhower administration. (In 1957, the Western powers submitted a draft treaty that limited use of space to peaceful and scientific purposes. The Soviet Union rejected this proposal.[77] Moscow offered its own draft treaty, which would have demilitarized outer space, and thus would have prohibited the presence of any weapons in space.[78]) In his September 29, 1960, address before the United Nations, President Dwight Eisenhower made the following proposal:

> We must not lose the chance we still have to control the future of outer space.
>
> I propose that . . . [we] agree, subject to appropriate verification, that no nation will put into orbit or station in outer space weapons of mass destruction.[79]

While these efforts did not produce results, they put the issues of WMD and outer space on the disarmament agenda.

The following year, President John F. Kennedy offered a proposal of his own in a September 25, 1961, address before the UN General Assembly:

> we shall urge proposals extending the United Nations Charter to the limits of man's exploration in the universe, reserving outer space for peaceful use, prohibiting *weapons of mass destruction* in space or on celestial bodies, and opening the mysteries and benefits of space to every nation.[80] [Emphasis added.]

The United States then submitted a draft treaty for complete disarmament that incorporated the following language: "The parties to the treaty would agree not to place in orbit weapons capable of producing mass destruction."[81] Following this, the White House initiated a comprehensive review of U.S. policy on disarmament in space. This ultimately led to an interagency recommendation that the United States support a ban on WMD in space. At the same time, the Kennedy administration issued a declaratory statement that outlined that position. On September 5, 1962, the Deputy Secretary of Defense, Roswell Gilpatric, gave a speech, reportedly cleared by President Kennedy, declaring, "We have no program to place any *weapons of mass destruction* into orbit."[82] [Emphasis added.]

The definition of WMD was a subject of a somewhat confused discussion at a meeting of the Committee of Principals on October 8, 1963. According to the meeting memorandum, the Joint Staff had advocated using the term WMD instead of directly mentioning nuclear weapons, although the rationale was unclear. Secretary of State Dean

Rusk asserted that using WMD would be seen as "nuclear weapons plus something else," noting that the "Joint Chiefs intention seemed to be to leave open the question of interpretation." Similarly, the President's science adviser added that he had thought WMD meant nuclear weapons plus "BW–CW." The Joint Staff representative at the meeting admitted that the military wanted to retain the option of placing in orbit small nuclear weapons for use as antisatellite weapons. However, even he conceded that it would be necessary to withdraw from an agreement should the United States deploy such weapons. When pressed by Secretary Rusk, Paul Nitze, Assistant Secretary of Defense for International Security Affairs (the functional equivalent of the Under Secretary of Defense for Policy in the current structure), indicated that DOD did not want a clear definition of WMD, apparently hoping to leave open the possibility that small nuclear weapons could be excluded from a definition. This position was not acceptable to the other participants, and the official conclusions of the meeting reported the following: "'Weapons of mass destruction' would have to be interpreted as including all nuclear weapons."[83]

Although both the United States and the Soviet Union were in complete agreement on the substance, domestic political considerations led President Kennedy to favor a General Assembly resolution over negotiation of a treaty at that time.[84] The result was UN General Assembly Resolution 1884 (XVIII):

> *The General Assembly*
>
> . . .
>
> *1. Welcomes* the expressions by the Union of Soviet Socialist Republics and the United States of America of their intention not to station in outer space any objects carrying nuclear weapons or other weapons of mass destruction.
>
> 2. *Solemnly calls upon all States:*
>
> *(a) To refrain from placing around the Earth any objects carrying nuclear weapons or other kinds of weapons of mass destruction, installing such weapons on celestial bodies, or stationing such weapons in outer space in any other manner;*
>
> *(b) To refrain from causing, encouraging or in any other way participating in the conduct of the forgoing activities.*

The issue reemerged in 1966, when President Lyndon Johnson accepted a proposal from the State Department to push for negotiation of an outer space treaty. Following the language of the earlier discussions, a May 7, 1966, White House press release, issued in the President's name, advocated that "No country should be permitted to

station weapons of mass destruction on a celestial body."[85] Following discussions between the United States and the Soviet Union, each of the countries issued substantively similar draft texts. As a result, relatively little negotiation was required to achieve a final text, which opened for signature on January 27, 1967.

The definition of WMD was raised several times during the 1967 Senate ratification hearings. The initial target of the questions was Arthur Goldberg, U.S. Ambassador to the United Nations, who was the lead American negotiator:

> **The Chairman [J. William Fulbright]**. What are the other weapons of mass destruction?
> **Mr. Goldberg.** Bacteriological, any type of weapons which could lead to the same type of catastrophe that a nuclear weapon could lead to.
> **The Chairman.** I see.
> **Mr. Goldberg.** It does not refer to any conventional weapon. It refers to a weapon of the magnitude of a nuclear, bacteriological weapon.[86]

Deputy Secretary of Defense Cyrus Vance provided a more complete answer in a subsequent hearing:

> **Senator [John Sherman] Cooper**. The treaty refers to weapons of mass destruction as well as nuclear weapons. Can you give us some statement about that?
> **Mr. Vance.** Yes, I believe it would include such other systems as chemical and biological weapons, sir, or any weapon which might be developed in the future which would have the capability of mass destruction such as that which would be wreaked by nuclear weapons.[87]

Although there are differences in the articulation of the definition, both appear to relate to the definition adopted by the CCA in 1948. Both mention the inclusion of certain specific weapons taken to have effects comparable to those of nuclear weapons (Goldberg only mentions biological, while Vance added chemical weapons). Only Vance mentioned a provision including future weapons having comparable effects.

Seabed Treaty

Article I of the 1972 Treaty on the Prohibition of the Emplacement of Nuclear Weapons and Other Weapons of Mass Destruction on the Seabed and the Ocean Floor and in the Subsoil Thereof also imposes restrictions on the geographic placement of WMD:

> The States Parties to this Treaty undertake not to emplant or emplace on the seabed and the ocean floor and in the subsoil thereof beyond the outer limit of a seabed zone, as defined in article II, any *nuclear weapons or any other types of weapons of mass destruction* as well as structures, launching installations or any other facilities specifically designed for storing, testing or using such weapons.[88] [Emphasis added.]

The origins of this treaty go back to 1967, when the Maltese delegate to the UN First Committee proposed negotiation of an agreement to ensure the peaceful use of the ocean's seabed. The Soviet Union tabled the original draft treaty, which would have banned any military facilities on the seabed.[89]

It took time for the United States to formulate an agreed position on this new treaty. There was universal agreement in Washington that the United States could not accept a treaty along the lines of the one proposed by the Soviets, which could have limited the ability of the United States to deploy undersea submarine tracking facilities. At the same time, however, the Department of Defense objected to a treaty that might limit its ability to deploy nuclear weapons mounted on mobile platforms on the seabed. The United States announced its support for a partial limit in President Johnson's 1968 speech at the United Nations:

> We must soon take up the question of arms limitations on the seabed in the light of the consideration being given by the General Assembly's Ad Hoc Committee on the Seabeds to a number of proposals for arms limitations on the seabed. Your conference should begin to define those factors vital to a workable, verifiable, and effective international agreement which would prevent the use of this new environment for the *emplacement of weapons of mass destruction*.[90] [Emphasis added.]

Ultimately, the Defense and State Departments reached an agreement that directed the American negotiator to deliver the following language:

> The United States proposes that the ENDC [Eighteen Nation Disarmament Committee, the predecessor body to the Committee on Disarmament] examine the question as to whether a viable international agreement may be achieved in which each party would agree not to emplace or fix weapons of mass destruction on the seabed or deep ocean floor.

The next year, the Nixon administration tabled a draft treaty that also added the reference to nuclear weapons found in the final treaty.

Ambassador James Leonard, then Deputy Director of the Arms Control and Disarmament Agency, articulated the position of the U.S. negotiators on the meaning of WMD during Senate hearings on treaty ratification:

> **Senator [Claiborne] Pell.** What would be your general definition of a weapon of mass destruction? What was the definition at the Geneva Conference?
> **Mr. Leonard.** Mr. Chairman, the term "weapons of mass destruction" is one that has come into quite a number of international documents, treaties and so on, and it has, I think, generally the meaning of embracing nuclear weapons, embracing also chemical and biological weapons, and then being open-ended, if I may express it that way, in order to take care of developments which one cannot specify at the present time, some form of weapon which might be invented or developed in the future, which would have devastating effects comparable to those of nuclear or biological or chemical weapons, but which one simply cannot describe at the present time.[91]

This is a restatement of the CCA definition (CBRN weapons, as well as possible future weapons).

Strategic Arms Reduction Treaty

The 1991 Strategic Arms Reduction Treaty (START) reiterates the prohibitions contained in the Seabed and Outer Space Treaties. These prohibitions are similar to the ones negotiated for the 1979 Strategic Arms Limitation Talks (SALT) II Treaty, which the United States never ratified.[92]

> 1. Each Party undertakes not to develop, test, or deploy:
> . . .
> (b) fixed ballistic or cruise missile launchers for emplacement on the ocean floor, on the seabed, or on the beds of internal waters and inland waters, or in the subsoil thereof, or mobile launchers of such missiles, which move only in contact with the ocean floor, the seabed, or the beds of internal waters and inland waters, or missiles for such launchers;
> **Agreed Statement to subparagraph (b)**. The obligations provided for in subparagraph 1(b) of Article IX of the Treaty shall apply to all areas of the ocean floor and the seabed, including the seabed zone referred to in Articles I and II of the 1971 Treaty on the Prohibition of the Emplacement of Nuclear Weapons and Other Weapons of Mass Destruction on the Seabed and the Ocean Floor and in the Subsoil Thereof.

> (c) systems for placing into Earth orbit nuclear weapons or any other kind of weapons of mass destruction, including fractional orbital missiles;
> **Common Understanding to subparagraph (c)**. The provisions of subparagraph 1(c) of Article IX of the Treaty do not require the dismantling or destruction of any existing launchers of either Party.[93]

While the Senate never ratified the SALT II Treaty, the United States agreed to abide by its provisions so long as the Soviets did the same.

The operative section of the 1991 START document appears in Article V, paragraph 18. While subparagraph (b) refers to the official title of the Seabed Treaty, but does not otherwise mention WMD, subparagraph (c) does not mention the Outer Space Treaty but does explicitly ban WMD in Earth orbit or in "a fraction of an Earth orbit."

> 18. Each Party undertakes not to produce, test, or deploy:
> . . .
> (b) launchers of ballistic or cruise missiles for emplacement on or for tethering to the ocean floor, the seabed, or the beds of internal waters and inland waters, or for emplacement in or for tethering to the subsoil thereof, or mobile launchers of such missiles that move only in contact with the ocean floor, the seabed, or the beds of internal waters and inland waters, or missiles for such launchers. This obligation shall apply to all areas of the ocean floor and the seabed, including the seabed zone referred to in Articles I and II of the Treaty on the Prohibition of the Emplacement of Nuclear Weapons and Other Weapons of Mass Destruction on the Seabed and the Ocean Floor and in the Subsoil Thereof of February 11, 1971;
> (c) systems, including missiles, for placing nuclear weapons or any other kinds of weapons of mass destruction into Earth orbit or a fraction of an Earth orbit.

The reference to "fraction of an Earth orbit" clearly is an expansion of the prohibition in the Space Treaty.[94]

Moon Agreement

In 1979, the General Assembly opened for signature the Agreement Governing the Activities of States on the Moon and Other Celestial Bodies, commonly known as the Moon Agreement. Despite the name, the provisions of the agreement also applied to other celestial bodies in our solar system. It entered into force on July 11, 1984, but only for

the signatory states. As of January 1, 2004, 10 states had ratified the agreement and another 5 had signed but not ratified it.[95] The United States never signed the agreement. Article 3 of the Moon Agreement contains the following:

> States Parties shall not place in orbit around or other trajectory to or around the Moon objects carrying nuclear weapons or any other kinds of weapons of mass destruction or place or use such weapons on or in the Moon.

While the language differs, this is clearly consistent with the existing language of the Outer Space Treaty. There is no indication that this provision provoked any significant disagreement. Rather, the controversy surrounding the Moon Agreement relates to Article 11, which contains language regarding the "Common Heritage of Mankind" that raised concerns about the status of property rights. It is widely argued that the agreement has dubious international standing due to its lack of international acceptance.[96]

Proposed WMD Treaty

In 1975, the Soviet Union asked the international community to consider negotiation of a treaty banning new types of WMD.[97] In response, the General Assembly passed a resolution that year calling on the Conference of the Committee on Disarmament (CCD) to consider the "prohibition of the development and manufacture of new weapons of mass destruction and new systems of such weapons."[98]

The matter was discussed at the General Assembly in 1975 and 1976, as well as at the 1976 session of the CCD. During the negotiations, the Western powers argued against the Soviet treaty, even as they accepted the underlying principles it affirmed. They agreed on the principle of prohibiting new types of WMD, and accepted the Soviet position that the 1948 CCA definition covered more than the four explicitly declared types of WMD (nuclear, biological, chemical, and radiological). On the other hand, they argued that it was not evident that the international community could identify any new categories of weapons that qualified as WMD. In particular, the Western powers argued that the categories of new WMD offered by the Soviets were too vague or did not qualify as WMD. Moreover, they argued that if a new type of WMD was identified in the future, the international treaty should draft a treaty to ban that specific type of weapon. In conclusion, the Western powers argued that the United Nations should not adopt a new treaty banning WMD but should keep the matter under review.

The result of the deliberations was General Assembly Resolution 32/84, adopted December 12, 1977. This resolution reaffirmed UN adherence to the CCA definition of WMD. It also provided policy guidance that appears to have defined the subsequent UN agenda on WMD. Part A of the resolution, adopted at the insistence of the Soviets, contained two significant passages:

> 1. *Requests* the Conference of the Committee on Disarmament to continue negotiations, with the assistance of qualified governmental experts, aimed at working out the text of an agreement on the prohibition of the development and manufacture of new types of weapons of mass destruction and new systems of such weapons, and, when necessary, specific agreements on this subject.
> . . .
> 3. *Urges* all States to refrain from any action which would impede international talks aimed at working out an agreement or agreements to prevent the use of scientific and technological progress for the development of new types of weapons of mass destruction and new systems of such weapons.

The text of part B was introduced by the United Kingdom and supported by the United States. It declares that the General Assembly:

> 1. *Urges* States to refrain from developing new weapons of mass destruction based on new scientific principles;
> . . .
> 4. *Welcomes* the active continuation of negotiations relating to the prohibition and limitation of identified weapons of mass destruction;
> 5. *Requests* the Conference of the Committee on Disarmament, while taking into account its existing priorities, to keep under review the question of the development of new weapons of mass destruction based on new scientific principles and to consider the desirability of formulating agreements on the prohibition of any specific new weapons which may be identified.

While part A merely discussed "new types" of WMD, part B made clear that the new WMD originated from new scientific principles. This suggests that the advocates of part B were attempting to clarify that the CCA definition could not be expanded to encompass types of weapons that existed in 1948, but that it could be expanded beyond CBRN if the new types relied on technologies not known or possible when the term was originally defined.

This issue was addressed once again during the 1978 Tenth Special Session of the General Assembly (the so-called Special Session on Disarmament). The final document generated by that meeting laid out international priorities for the negotiation of disarmament agreements:

> Priorities in disarmament negotiations shall be: nuclear weapons; other weapons of mass destruction, including chemical weapons; conventional weapons, including any which may be deemed to be injurious or to have indiscriminate effects; and reduction of armed forces.[99]

Since that time, prohibition of new types of WMD has been on the UN disarmament agenda, first at the CCD and then its successor entity, the Conference on Disarmament.[100] While no new types of WMD have been identified, there appears to be widespread support in the international community for sustaining the prohibition on existing and new types of WMD.[101]

Other International Diplomacy

As the earlier discussion highlights, WMD has been a focus of discussion at both the Security Council and the General Assembly since 1946. A few developments since the end of the Cold War highlight this continuing UN use of the term WMD in its deliberations. At the conclusion of the 1992 meeting of the Heads of State and Government of the member states of the UN Security Council, the president of the Security Council made the following statement with the authorization of the participants:

> The proliferation of all weapons of mass destruction constitutes a threat to international peace and security. The members of the Council commit themselves to working to prevent the spread of technology related to the research for or production of such weapons and to take appropriate action to that end.[102]

This was further emphasized in 2004, when the Security Council adopted Resolution 1540, which reaffirmed the 1992 declaration by the Security Council's president, "including the need for all Member States to fulfill their obligations in relation to arms control and disarmament and to prevent proliferation in all its aspects of all weapons of mass destruction." Significantly, this was the only mention of WMD in the resolution's text. The rest of the document refers to "nuclear, chemical, and biological weapons and their means of delivery."[103]

A 1995 UN General Assembly Resolution mentioned WMD three times in connection with measures related to their control or abolition, including an affirmation that the General Assembly "calls upon all States to implement fully their commitments in the field of disarmament and non-proliferation of weapons of mass destruction."[104] In 1996, the General Assembly adopted a resolution on the "prohibition of the development and manufacture of new types of weapons of mass destruction and new systems of such weapons." In that resolution, the General Assembly declared its adherence to the CCA definition and noted that it was

> determined to prevent the emergence of new types of weapons of mass destruction that have characteristics comparable in destructive effect to those of weapons of mass destruction identified in the definition of weapons of mass destruction adopted by the United Nations in 1948.

Moreover, the resolution reiterated that the General Assembly "reaffirms that effective measures should be taken to prevent the emergence of new types of weapons of mass destruction."[105]

The United States is party to several agreements that include definitions of WMD. The Guidelines for the Missile Technology Control Regime (MTCR) contain the following language: "weapons of mass destruction (i.e. nuclear, chemical and biological weapons)." Hence, WMD means NBC in the context of implementation of the MTCR.[106] In 2004, the United States signed three bilateral ship-boarding agreements (with Liberia, the Marshall Islands, and Panama) to support the objectives of the Proliferation Security Initiative (PSI). The agreements ensure that the United States has the legal authority to search and seize ships belonging to the fleets of those countries should they be carrying WMD or related cargoes. The three agreements contain identical language specifying that "'weapons of mass destruction (WMD)' means nuclear, chemical, biological and radiological weapons."[107] For purposes of these PSI agreements, WMD is equivalent to CBRN.

Conclusion

As this paper suggests, *weapons of mass destruction* is not a new term, and it is not one used only by arms control specialists. Rather, it has a history in international diplomacy that extends back nearly 60 years. As one would expect of a term used in international agreements, it has an accepted meaning for use in disarmament negotiations and in defining treaty obligations accepted by the United States. That specific definition is clearly

the one proposed to the United Nations in 1948 and used in subsequent disarmament negotiations. Hence, any definition of the term *weapons of mass destruction* used as a matter of policy by the U.S. Government should be consistent with that one, effectively meaning either *nuclear, biological, and chemical*, or *chemical, biological, radiological, or nuclear*.

The law enforcement community has never advanced a rationale for the adoption of the broader definition that equates *weapons of mass destruction* to *chemical, biological, radiological, nuclear, and high explosive weapons* as found in the U.S. criminal code. There was no discussion of this provision when Congress enacted the original legislation containing that provision. Moreover, many of the crimes prosecuted under provisions associated with that definition clearly are prosecutable under other provisions of the criminal code. Hence, given the contradictions between the definition in the U.S. criminal code and the one that the United States accepted in treaty obligations, there is a case for making U.S. domestic law consistent with the international definition of WMD.

Afterword

In August 2005, U.S. Strategic Command (USSTRATCOM) generated yet another definition for the term *weapons of mass destruction*. The memorandum establishing the USSTRATCOM Center for Combating Weapons of Mass Destruction contained the following language:

> The term "WMD" is defined as weapons—nuclear, biological, chemical and radiological—and their means of delivery that are capable of a high order of destruction and/or of being used in such a manner as to destroy large numbers of people or cause significant infrastructure damage. [108]

This definition is a unique formulation that combines elements of the second (WMD as CBRN) and the fourth (WMD as massively destructive weapons) alternative definitions. A similarity with the language appearing in the DOD Dictionary (I–3) suggests that it is a significantly modified variant of that Joint Staff definition. It varies in three significant ways: the Strategic Command definition excludes high explosives, adds a reference to infrastructure damage, and expands the category of included delivery systems to cover even those that are "divisible and separable."

This definition appears to exclude many small-scale uses of chemical and biological agents that are of concern to other agencies. Hence,

terrorist acquisition of ricin or of improvised chemical devices, neither of which are likely to cause significant destruction or damage, are clearly excluded by the USSTRATCOM definition. Moreover, it is unclear if the Strategic Command definition is intended to cover highly disruptive attacks that cause few fatalities, such as the 2001 anthrax letter attack. The terminology used in this definition (*destruction, destroy, and damage*) are words more typically associated with explosive devices, leaving unclear whether biological attacks are included in the definition.

As a result, this definition poses certain challenges. It differs from definitions used by the Joint Staff and the Office of the Secretary of Defense and is at variance with those adopted by the State Department and by the White House in national strategy guidance documents. The differences may lead to policy disconnects if the different components attempt to interpret activities rigorously through the prism of their own definitions. Moreover, the decision of USSTRATCOM to assign its own unique meaning to a term of art suggests that there are challenges ahead as it seeks to undertake its assigned responsibility for integration and synchronization of combating WMD in the Defense Department.

As a practical matter, this new definition may not make much difference. U.S. Strategic Command is likely to follow the lead of other agencies in addressing WMD matters. Nevertheless, adding a new definition to an already crowded field cannot help and is potentially counterproductive to the work of its new Combating WMD Center.

Appendix A. Executive Branch Definitions of WMD

	Source	Definition
1	President George W. Bush, *National Strategy for Combating Weapons of Mass Destruction,* December 2002	Nuclear, chemical, and biological weapons
2	President Bill Clinton, Executive Order 12938, "Proliferation of Weapons of Mass Destruction," November 14, 1994 (as amended on July 28, 1998, by Executive Order 13094 and as extended through November 2005 on November 4, 2004 [*Federal Register*, November 5, 2004]), 64, 637	Nuclear, biological, and chemical weapons ("weapons of mass destruction")
3	Joint Staff, Joint Publication 1–02, *DOD Dictionary of Military and Associated Terms* (as amended through March 23, 2004). The definition used through at least 1998 in this publication was identical to the one appearing in A–7 below.	Weapons that are capable of a high order of destruction and/or of being used in such a manner as to destroy large numbers of people. Weapons of mass destruction can be high explosives or nuclear, biological, chemical, and radiological weapons, but exclude the means of transporting or propelling the weapon where such means is a separable and divisible part of the weapon. Also called WMD.
4	Office of the Secretary of Defense, *Proliferation: Threat and Response,* January 2001; available at <www.defenselink.mil/pubs/ptr20010110.pdf>	weapons of mass destruction—including nuclear, biological, and chemical weapons and missiles
5	Office of the Secretary of Defense, *Proliferation: Threat and Response, 1997*; available at <www.defenselink.mil/pubs/prolif97/index.html>	nuclear, biological, or chemical weapons and their delivery means, often referred to as weapons of mass destruction
6	Department of Homeland Security, *National Response Plan*, December 2004	As defined in Title 18, U.S.C. § 2332a: (1) any explosive, incendiary, or poison gas, bomb, grenade, rocket having a propellant charge of more than 4 ounces, or missile having an explosive or incendiary charge of more than one-quarter ounce, or mine or similar device; (2) any weapon that is designed or intended to cause death or serious bodily injury through the release, dissemination, or impact of toxic or poisonous chemicals or their precursors; (3) any weapon involving a disease organism; or (4) any weapon that is designed to release radiation
7	Department of Army, *Dictionary of United States Army Terms*, AR 310–25, March 1969 (Joint and Army term). This definition appears in versions of Joint Publication 1–02, *DOD Dictionary of Military and Associated Terms*, through the edition of June 10, 1998.	In arms control usage, weapons that are capable of a high order of destruction and/or of being used in such a manner as to destroy large numbers of people. Can be nuclear, chemical, biological, and radiological weapons, but excludes the means of transporting or propelling the weapon where such means is a separate and divisible part of the weapon.
8	Chairman, Joint Chiefs of Staff, *National Military Strategy*, 2004	The term WMD/E relates to a broad range of adversary capabilities that pose potentially devastating impacts. WMD/E includes chemical, biological, radiological, nuclear, and enhanced high explosive weapons as well as other, more asymmetrical "weapons." They may rely more on disruptive impact than destructive kinetic effects. For example, cyberattacks on U.S. commercial information systems or attacks against transportation networks may have a greater economic or psychological effect than a relatively small release of a lethal agent.
9	Central Intelligence Agency, *Comprehensive Report of the Special Advisor to the DCI on Iraq's WMD* (Duelfer Report), September 30, 2004	Weapons that are capable of a high order of destruction and/or being used in such a manner as to kill large numbers of people. Can be nuclear, chemical, biological, or radiological weapons but excludes the means of transporting or propelling the weapons where such means are a separable and divisible part of the weapon. Chemical Weapons and Biological Weapons need to be of a certain size to count as WMD—single chemical or biological artillery rounds would not be considered to be WMD, due to the limited damage they could produce.
10	Ambassador James Leonard, Assistant Director, Arms Control and Disarmament Agency, Seabed Arms Control Treaty, Hearings before the Committee on Foreign Relations, 92^{d} Congress, 2^{d} Session, on EX. H. 92–1, Treaty on the Prohibition of the Emplacement of Nuclear Weapons and Other Weapons of Mass Destruction on the Seabed and the Ocean Floor and in the Subsoil Thereof, January 27, 1972 (Washington: Government Printing Office, 1972), 13	"the term 'weapons of mass destruction' is one that has come into quite a number of international documents, treaties and so on, and it has, I think, generally the meaning of embracing nuclear weapons, embracing also chemical and biological weapons, and then being open-ended, if I may express it that way, in order to take care of developments which one cannot specify at the present time, some form of weapon which might be invented or developed in the future, which would have devastating effects comparable to those of nuclear or biological or chemical weapons, but which one simply cannot describe at the present time."
11	*United States Government Interagency Domestic Terrorism Concept of Operations Plan*, January 2001, B–5, accessed at <www.fema.gov/rrr/conpla>	Weapon of Mass Destruction—A WMD is any device, material, or substance used in a manner, in a quantity or type, or under circumstances evidencing an intent to cause death or serious injury to persons or significant damage to property.

Appendix B. WMD Defined in Law

	Source	Definition
1	The Weapons of Mass Destruction Control Act of 1992, enacted as Title XV of the Defense Authorization Act of 1993, P.L. 102–484 (enacted October 23, 1992)	nuclear, biological, and chemical weapons (hereinafter in this title referred to as "weapons of mass destruction")
2	U.S. Code, 50 U.S.C. 2366, enacted as part of the Intelligence Authorization Act for Fiscal Year 1997, October 11, 1996	REPORTS.—Not later than 6 months after the date of the enactment of this Act, and every 6 months thereafter, the Director of Central Intelligence shall submit to Congress a report on— (1) the acquisition by foreign countries during the preceding 6 months of dual-use and other technology useful for the development or production of weapons of mass destruction (including nuclear weapons, chemical weapons, and biological weapons) and advanced conventional munitions
3	U.S. Code, 50 U.S.C. 2302, enacted as part of the Defense Against Weapons of Mass Destruction Act of 1996, September 23, 1996, National Defense Authorization Act for Fiscal Year 1997, P.L. 104–201	(1) The term "weapon of mass destruction" means any weapon or device that is intended, or has the capability, to cause death or serious bodily injury to a significant number of people through the release, dissemination, or impact of— (A) toxic or poisonous chemicals or their precursors; (B) a disease organism; or (C) radiation or radioactivity.
4	U.S. Code, 18 U.S.C. 2332a, enacted as part of the Violent Crime Control and Law Enforcement Act of 1994, September 13, 1994, P.L. 103–322; subsequently amended	The term "weapon of mass destruction" means— (A) any destructive device as defined in section 921 of this title; (B) any weapon that is designed or intended to cause death or serious bodily injury through the release, dissemination, or impact of toxic or poisonous chemicals, or their precursors; (C) any weapon involving a disease organism; or (D) any weapon that is designed to release radiation or radioactivity at a level dangerous to human life 18 U.S.C. 921: The term "destructive device" means— (A) any explosive, incendiary, or poison gas— (i) bomb, (ii) grenade, (iii) rocket having a propellant charge of more than four ounces, (iv) missile having an explosive or incendiary charge of more than one-quarter ounce, (v) mine, or (vi) device similar to any of the devices described in the preceding clauses; (B) any type of weapon (other than a shotgun or a shotgun shell which the Secretary finds is generally recognized as particularly suitable for sporting purposes) by whatever name known which will, or which may be readily converted to, expel a projectile by the action of an explosive or other propellant, and which has any barrel with a bore of more than one-half inch in diameter; and (C) any combination of parts either designed or intended for use in converting any device into any destructive device described in subparagraph (A) or (B) and from which a destructive device may be readily assembled. The term "destructive device" shall not include any device which is neither designed nor redesigned for use as a weapon; any device, although originally designed for use as a weapon, which is redesigned for use as a signaling, pyrotechnic, line throwing, safety, or similar device; surplus ordnance sold, loaned, or given by the Secretary of the Army pursuant to the provisions of section 4684(2), 4685, or 4686 of title 10; or any other device which the Secretary of the Treasury finds is not likely to be used as a weapon, is an antique, or is a rifle which the owner intends to use solely for sporting, recreational or cultural purposes.

Appendix C. Selected International Definitions of WMD

	Source	Definition
1	North Atlantic Treaty Organization (NATO), "NATO's Response to Proliferation of Weapons of Mass Destruction: Facts and Way Ahead," Press Release (95) 124, November 29, 1995; available at <www.nato.int/docu/pr/1995/p95-124.htm>	"WMD" and "NBC weapons" can be used interchangeably
2	NATO Glossary of Terms and Definitions, AAP–6, 2004; available at <www.nato.int/docu/stanag/aap006/aap6.htm>	weapon of mass destruction/*arme de destruction massive*: A weapon that is capable of a high order of destruction and of being used in such a manner as to destroy people, infrastructure, or other resources on a large scale (1/10/2003)
3	Missile Technology Control Regime, Guidelines for Sensitive Missile-Relevant Transfers, January 7, 1993, available at <www.state.gov/www/global/arms/treaties/mtcr_anx.html>	The purpose of these Guidelines is to limit the risks of proliferation of weapons of mass destruction (i.e. nuclear, chemical and biological weapons)
4	Mission Statement, WMD Branch of the United Nations (UN) Department for Disarmament Affairs; available at <http://disarmament.un.org:8080/wmd>	The Weapons of Mass Destruction Branch provides substantive support for the activities of the United Nations in the area of weapons of mass destruction (nuclear, chemical, and biological weapons), including the threat of use of weapons of mass destruction in terrorist acts, as well as missiles
5	UN Committee For Conventional Armaments, August 1948	weapons of mass destruction should be defined to include atomic explosive weapons, radio active material weapons, lethal chemical and biological weapons, and any weapons developed in the future which have characteristics comparable in destructive effect to those of the atomic bomb or other weapons mentioned above
6	Jayantha Dhanapala, Under-Secretary-General for Disarmament Affairs, United Nations, "International Law, Security, and Weapons of Mass Destruction," 2002 Spring Meeting of the Section of International Law and Practice, American Bar Association, New York, May 9, 2002; available at <http://disarmament2.un.org/speech/statements.htm>	weapons of mass destruction . . . today consist of nuclear, biological, and chemical arms
7	*Dictionary of Basic Military Terms: A Soviet View*, published under the auspices of the U.S. Air Force, *Soviet Military Thought*, vol. 9, trans. DGIS Multilingual Section, Translation Bureau, Secretary of State Department, Ottawa, Canada (Washington, DC: U.S. Government Printing Office, 1976), 148	*Oruzhiye massovogo porazheniya* (weapons of mass destruction)—Weapons used to inflict heavy casualties. They include nuclear, chemical, and bacteriological agents. See also the entry for *zashchita voysk ot oruzhiya massovogo porazheniya* (protection of troops from weapons of mass destruction): "The complex measures taken for the purpose of preventing injury to personnel and damage to combat materiel and equipment by the weapons and agents used in nuclear, chemical and bacteriological warfare" (80).
8	*Civil Defense* (*Grazhdanskaya Oborona*), M.N. Titov, P.T. Yegorov, B.A. Gayko et al., ed. G.A. Christy (Moscow: Publishing House for Higher Education, 1974). Trans. Joint Publications Research Service, Arlington, VA (for Defense Civil Preparedness Agency), and Joseph Lewin, Oak Ridge National Laboratory, ORNL–38–2845, July 1975	Mass destruction weapons is a term used to designate nuclear and chemical weapons capable of inflicting death, injury, and damage in a short period of time on a large number of humans, animals, and plants over extensive areas. Nuclear weapons in addition cause the destruction of buildings, installations, and other structures. (The chapter that follows then proceeds to describe nuclear [but not radiological], chemical, and biological weapons.)
9	*Tajikistan Criminal Code*, available at <http://www.policy.hu/zaripova/PCode.htm>	SECTION XV. CRIME AGAINST THE PEACE AND SAFETY OF MANKIND Chapter 34. Crime Against the Peace and Safety of Mankind Article 397. Production or Distribution of Mass Destruction Weapons Producing, purchasing, keeping, transporting or selling nuclear, neutron, chemical, biological (bacteriological), climatic or other kind of mass destruction weapons prohibited by international treaty, as well as transferring initial or special fissionable materials, technologies which may be used for creating mass destruction weapons to any state which does not have nuclear weapons or transferring other kinds of mass destruction weapons to anybody or components which are necessary for producing them, is punishable by imprisonment for a period of 12 to 20 years.

Appendix D. Selected Definitions of WMD in State Law

	Source	Definition
1	Arizona A.R.S. § 13–2301 (2004)	"Weapon of mass destruction" means: (a) Any device or object that is designed or that the person intends to use to cause multiple deaths or serious physical injuries through the use of an explosive agent or the release, dissemination, or impact of a toxin, biological agent, poisonous chemical, or its precursor, or any vector. (b) Except as authorized and used in accordance with a license, registration or exemption by the radiation regulatory agency pursuant to section 30–672, any device or object that is designed or that the person intends to use to release radiation or radioactivity at a level that is dangerous to human life.
2	Arkansas The Homeland Security Information Act, Act 1366 of 2003, April 15, 2003	"Weapon of mass destruction" means an explosive, chemical, radioactive, or biological agent, or any other substance or device capable of causing extensive property damage, death, or serious physical injury to multiple persons in a single act or series of acts.
3	California Cal. Penal Code § 11417 (2004)	"Weapon of mass destruction" includes chemical warfare agents, weaponized biological or biologic warfare agents, restricted biological agents, nuclear agents, radiological agents, or the intentional release of industrial agents as a weapon, or an aircraft, vessel, or vehicle, as described in Section 34500 of the Vehicle Code, which is used as a destructive weapon.
4	District of Columbia D.C. Code § 22–3152 (2004)	"Weapon of mass destruction" means: (A) Any destructive device that is designed, intended, or otherwise used to cause death or serious bodily injury, including: (i) An explosive, incendiary, or poison gas: (I) Bomb; (II) Grenade; (III) Rocket; (IV) Missile; (V) Mine; or (VI) Device similar to any of the devices described in the preceding clauses;(ii) A mortar, cannon, or artillery piece; or (iii) Any combination of parts either designed or intended for use in converting any device described into a device described in sub-subparagraphs (i) through (iii) of this paragraph and from which such device may be readily assembled; (B) An object similar to or used to achieve the same destructive effect of any of the devices described in subparagraph (A) of this paragraph; (C) Any weapon that is designed, intended, or otherwise used to cause death or serious bodily injury through the release, dissemination, or impact of a toxic or poisonous chemical; (D) Any weapon that is designed, intended, or otherwise used to cause death or serious bodily injury through the release, dissemination, or impact of a biological agent or toxin; or (E) Any weapon that is designed, intended, or otherwise used to cause death or serious bodily injury through the release, dissemination, or impact of radiation or radioactivity, or that contains nuclear material.
5	Florida Florida Annotated Statutes Fla. Stat. § 790.166 (2004)	"Weapon of mass destruction" means: 1. Any device or object that is designed or intended to cause death or serious bodily injury to any human or animal, or severe emotional or mental harm to any human, through the release, dissemination, or impact of toxic or poisonous chemicals, or their precursors; 2. Any device or object involving a biological agent; 3. Any device or object that is designed or intended to release radiation or radioactivity at a level dangerous to human or animal life; or 4. Any biological agent, toxin, vector, or delivery system.
6	Georgia O.C.G.A. § 16–7–80 (2004)	"Weapon of mass destruction" means any device which is designed in such a way as to release radiation or radioactivity at a level which will result in internal or external bodily injury or death to any person.

Appendix D, cont.

7	Idaho Idaho Code § 18–3322 (2004)	The term "weapon of mass destruction" means: (a) Any bomb or destructive device, as those terms are defined in section 18–3318, Idaho Code; (b) Any weapon that is designed or intended to cause death or serious bodily injury through the release, dissemination or impact of toxic or poisonous chemicals or the precursors of such chemicals; (c) Any weapon involving a disease organism; or (d) Any weapon that is designed to release radiation or radioactivity at a level dangerous to human life. § 18-3318. Definitions Definitions as used in sections 18–3319, 18–3320 and 18–3321, Idaho Code: (1) "Bomb" means any chemical or mixture of chemicals contained in such a manner that it can be made to explode with fire or force, and combined with the method or mechanism intended to cause its explosion. The term includes components of a bomb only when the individual charged has taken steps to place the components in proximity to each other, or has partially assembled components from which a completed bomb can be readily assembled. "Bomb" does not include: rifle, pistol, or shotgun ammunition and their components; fireworks; boating, railroad and other safety flares or propellants used in model rockets or similar hobby activities. (2) "Destructive device" means: (a) Any explosive, incendiary or poisonous gas: (i) Bomb; (ii) Grenade; (iii) Rocket having a propellant charge of more than four (4) ounces; (iv) Missile having an explosive or incendiary charge of more than one-fourth (1/4) ounce; (v) Mine; (vi) Similar device. (b) Any type of weapon, by whatever name known, which will, or which may be imminently converted to, expel a projectile by the action of an explosive or other propellant, the barrel or barrels of which have a bore of more than 0.700 inches in diameter, except rifled and unrifled shotguns or shotgun shells. (c) Components of a destructive device only when the individual charged has taken steps to place the components in proximity to each other, or has partially assembled components from which a completed destructive device can be readily assembled. (d) The term "destructive device" shall not include: (i) Any device which is neither designed nor redesigned for use as a weapon; (ii) Any device which, although originally designed for use as a weapon, has been redesigned for use as a signaling, pyrotechnic, line throwing, safety or similar device; (iii) Otherwise lawfully owned surplus military ordnance; (iv) Antiques or reproductions thereof and rifles held for sporting, recreational, investment or display purposes; (v) Rifle, pistol or shotgun ammunition and their components.
8	Indiana Burns Ind. Code Ann. § 35–41–1–29.4 (2004)	"Weapon of mass destruction" means any chemical device, biological device or organism, or radiological device that is capable of being used for terrorism.
9	Minnesota Minn. Stat. § 609.712 (2003)	"Weapon of mass destruction" includes weapons, substances, devices, vectors, or delivery systems that: (1) are designed or have the capacity to cause death or great bodily harm to a considerable number of people through the release, dissemination, or impact of toxic or poisonous chemicals, or their precursors, disease organisms, biological agents, or toxins; or (2) are designed to release radiation or radioactivity at a level dangerous to human life.
10	Nevada NRS § 202.4445 (2004)	"Weapon of mass destruction" means any weapon or device that is designed or intended to create a great risk of death or substantial bodily harm to a large number of persons.

Appendix D, cont.

11	North Carolina N.C. Gen. Stat. § 14–288.21 (2004) and N.C. Gen. Stat. § 14–288.8 (2004)	§ 14–288.21 The term "nuclear, biological, or chemical weapon of mass destruction," as used in this Article, means any of the following: (1) Any weapon, device, or method that is designed or has the capability to cause death or serious injury through the release, dissemination, or impact of: a. Radiation or radioactivity; b. A disease organism; or c. Toxic or poisonous chemicals or their immediate precursors. (2) Any substance that is designed or has the capability to cause death or serious injury and: a. Contains radiation or radioactivity; b. Is or contains toxic or poisonous chemicals or their immediate precursors; or c. Is or contains one or more of the following: 1. Any select agent that is a microorganism, virus, bacterium, fungus, rickettsia, or toxin listed in Appendix A of Part 72 of Title 42 of the Code of Federal Regulations. 2. Any genetically modified microorganisms or genetic elements from an organism on Appendix A of Part 72 of Title 42 of the Code of Federal Regulations, shown to produce or encode for a factor associated with a disease. 3. Any genetically modified microorganisms or genetic elements that contain nucleic acid sequences coding for any of the toxins listed on Appendix A of Part 72 of Title 42 of the Code of Federal Regulations, or their toxic submits. § 14–288.8 The term "weapon of mass death and destruction" includes: (1) Any explosive or incendiary: a. Bomb; or b. Grenade; or c. Rocket having a propellant charge of more than four ounces; or d. Missile having an explosive or incendiary charge of more than one-quarter ounce; or e. Mine; or f. Device similar to any of the devices described above; or (2) Any type of weapon (other than a shotgun or a shotgun shell of a type particularly suitable for sporting purposes) which will, or which may be readily converted to, expel a projectile by the action of an explosive or other propellant, and which has any barrel with a bore of more than one-half inch in diameter; or (3) Any firearm capable of fully automatic fire, any shotgun with a barrel or barrels of less than 18 inches in length or an overall length of less than 26 inches, any rifle with a barrel or barrels of less than 16 inches in length or an overall length of less than 26 inches, any muffler or silencer for any firearm, whether or not such firearm is included within this definition. For the purposes of this section, rifle is defined as a weapon designed or redesigned, made or remade, and intended to be fired from the shoulder; or (4) Any combination of parts either designed or intended for use in converting any device into any weapon described above and from which a weapon of mass death and destruction may readily be assembled. The term "weapon of mass death and destruction" does not include any device which is neither designed nor redesigned for use as a weapon; any device, although originally designed for use as a weapon, which is redesigned for use as a signaling, pyrotechnic, line-throwing, safety, or similar device; surplus ordnance sold, loaned, or given by the Secretary of the Army pursuant to the provisions of section 4684(2), 4685, or 4686 of Title 10 of the United States Code; or any other device which the Secretary of the Treasury finds is not likely to be used as a weapon, is an antique, or is a rifle which the owner intends to use solely for sporting purposes, in accordance with Chapter 44 of Title 18 of the United States Code.
12	Ohio ORC Ann. 2917.31 (2004)	"Weapon of mass destruction" means any of the following: (a) Any weapon that is designed or intended to cause death or serious physical harm through the release, dissemination, or impact of toxic or poisonous chemicals, or their precursors; (b) Any weapon involving a disease organism or biological agent; (c) Any weapon that is designed to release radiation or radioactivity at a level dangerous to human life; (d) Any of the following, except to the extent that the item or device in question is expressly excepted from the definition of "destructive device" pursuant to 18 U.S.C. 921(a)(4) and regulations issued under that section: (i) Any explosive, incendiary, or poison gas bomb, grenade, rocket having a propellant charge of more than four ounces, missile having an explosive or incendiary charge of more than one-quarter ounce, mine, or similar device; (ii) Any combination of parts either designed or intended for use in converting any item or device into any item or device described in division (E)(3)(d)(i) of this section and from which an item or device described in that division may be readily assembled.

Appendix D, cont.

13	Pennsylvania 18 Pa. C.S. § 2715 (2004)	"Weapon of mass destruction." A bomb, biological agent, chemical agent or nuclear agent.
14	South Carolina S.C. Code Ann. § 16–23–710 (2003)	"Weapon of mass destruction" means: (a) any destructive device as defined in item (7); (b) any weapon that is designed or intended to cause death or serious bodily injury through the release, dissemination, or impact of toxic or poisonous chemicals, or their precursors; (c) any weapon involving a disease organism; or (d) any weapon that is designed to release radiation or radioactivity at a level dangerous to human life. (7) "Destructive device" means: (a) a bomb, incendiary device, or any thing that can detonate, explode, be released, or burn by mechanical, chemical, or nuclear means, or that contains an explosive, incendiary, poisonous gas, or toxic substance (chemical, biological, or nuclear materials) including, but not limited to, an incendiary or over-pressure device, or any other device capable of causing damage, injury, or death; (b) a bacteriological weapon or biological weapon; or (c) a combination of any parts, components, chemical compounds, or other substances, either designed or intended for use in converting any device into a destructive device which has been or can be assembled to cause damage, injury, or death.
15	Tennessee Tenn. Code Ann. § 39–13–803 (2004)	"Weapon of mass destruction" includes chemical warfare agents, biological or biologic warfare agents, weaponized agents, weaponized biological or biologic warfare agents, nuclear agents, radiological agents, or the intentional release of industrial agents as a weapon.
16	Utah Utah Code Ann. § 76–10–401 (2004)	(a) "Weapon of mass destruction" means: (i) any item or instrumentality that is designed or intended to cause widespread death or serious bodily injury to multiple victims; (ii) any item or instrumentality that is designed or intended to cause death or serious bodily injury through the release, dissemination, or impact of toxic or poisonous chemicals, or their precursors; (iii) any disease organism, including any biological agent, toxin, or vector which is used or intended to be used as a weapon; (iv) any item or instrumentality that is designed to release radiation or radioactivity at a level dangerous to human life and that is used or intended to be used as a weapon; or (v) any substance or material or combination which has been prepared or altered for use in the creation of a weapon described in Subsections (6)(a)(i) through (iv). (b) "Weapon of mass destruction" does not include firearms or rifle, pistol, or shotgun ammunition, reloading components, or muzzleloading equipment.
17	Vermont 13 V.S.A. § 3501 (2004)	"Weapon of mass destruction" means a chemical warfare agent, weaponized biological or biologic warfare agent, nuclear agent, or radiological agent.
18	Wyoming Wyo. Stat. § 35–9–152 (2004)	"Weapons of mass destruction" means as defined in 18 U.S.C. 2332(a) as of April 1, 2004, or as subsequently defined by rules and regulations of the homeland security director.

Notes

[1] Donald H. Rumsfeld, memorandum, "Designation of Responsibilities for Combating Weapons of Mass Destruction (WMD) to Commander, U.S. Strategic Command (CDRUSSTRATCOM)," January 6, 2005.

[2] *National Strategy to Combat Weapons of Mass Destruction*, December 2002, 1, available at <www.whitehouse.gov/news/releases/2002/12/WMDStrategy.pdf>. The strategy was not signed by President George W. Bush and did not contain a forward released under his signature (as was done with the National Security Strategy issued the previous September). However, the White House issued a press statement attributed to the President making clear that the Combating WMD Strategy reflected his views:

> Today I have issued the *National Strategy to Combat Weapons of Mass Destruction*. The strategy establishes a comprehensive approach to counter the growing threat from weapons of mass destruction (WMD), including nuclear, radiological, biological, and chemical weapons. This strategy is integral to the *National Security Strategy of the United States of America and the National Strategy for Homeland Security*. We will not permit the world's most dangerous regimes and terrorists to threaten our Nation and our friends and allies with the world's most destructive weapons.

See George W. Bush, "Statement by the President," December 11, 2002, available at <www.whitehouse.gov/news/releases/2002/12/20021211-8.html>.

[3] Susan D. Moeller, "Media Coverage of Weapons of Mass Destruction," Center for International and Security Studies, University of Maryland, College Park, MD, March 9, 2004, 28, available at <www.cissm.umd.edu/documents/WMDstudy_full.pdf>.

[4] For example, Ashton B. Carter, "How to Counter WMD," *Foreign Affairs* (September/October 2004), 73, asserts that WMD are generally considered to be nuclear, biological, and chemical weapons and their delivery means, as well as so-called "dirty bombs" (radiological dispersion devices). He argues that this definition "is too broad" and proposes to define WMD as only nuclear and biological weapons. Similarly, Gert G. Harigel, "Introduction to Chemical and Biological Weapons—Chemical and Biological Weapons: Use in Warfare, Impact on Society and Environment," Carnegie Endowment for International Peace, 2001, argues that neither chemical nor biological weapons should be considered WMD based on the numbers of people actually killed by use of such weapons, but that most conventional munitions should. Available at <www.ceip.org/files/Publications/Harigelreport.asp?p=8&from=pubauthor>.

A systematic attempt to develop an alternative definition for WMD was proposed in National Security Policy Division, Headquarters, U.S. Air Force Staff, "Emerging WMD Technologies and the U.S. Air Force," Air Force Emerging Issues Project, December 2004. The paper proposes a Mass Destruction Index to create a quantitatively comparable measure of destructiveness and gives examples of its application but provides no details into how the index was constructed. The authors of that study suggest adoption of a quantitative, effects-based definition, but admitted to failure in attempting to create such an alternative.

[5] For example, George Perkovich, "Deconflating WMD," Paper No. 17, WMD Commission, n.d., accessed at <www.wmdcommission.org>.

[6] "Archbishop's Appeal: Individual Will and Action; Guarding Personality," *The Times* (London), December 28, 1937, 9.

[7] In a joint declaration signed by President Harry Truman, Prime Minister Clement Attlee of the United Kingdom, and Prime Minister Mackenzie King of Canada. See Department of State, Historical Office, *Documents on Disarmament, 1945–1969, Volume I: 1945–1956*, Publication 7008, August 1960, 1–3.

[8] UN Assembly Resolution 1(I), "Establishment of a Commission to Deal with the Problem Raised by the Discovery of Atomic Energy," January 24, 1946. Unless specified otherwise, all UN General Assembly resolutions available at <www.un.org/documents/resga.htm>.

[9] Commission for Conventional Armaments, UN document S/C.3/32/Rev.1, August 1948, as quoted in United Nations, Office of Public Information, *The United Nations and Disarmament, 1945–1965*, UN Publication 67.I.8, 28.

[10] There is a fourth treaty now in force, the Moon Agreement, which also controls WMD. Most countries, including the United States, have not become a party to it for reasons that have nothing to do with disarmament issues. The Outer Space Treaty, Seabed Treaty, and Moon Agreement impose limitations on "nuclear weapons or any other kinds of weapons of mass destruction."

[11] This background casts doubt on those who contend that there is no legal meaning associated with the term, as argued, for example, by David P. Fidler, "Weapons of Mass Destruction and International Law," *ASIL Insights*, February 2003, accessed at <www.asil.org/insights/insigh97.htm>:

> Contemporary international legal analysis generally follows this conventional definition of WMD, even though neither treaty law nor customary international law contains an authoritative definition of WMD. The reason such a definition does not exist is that states have historically used international law to address each category of weapons within the WMD rubric. International law specifically on WMD is, thus, composed of three different sets of rules for each WMD technology.

It is unclear, however, whether Fidler was aware of the history recounted here.

[12] An online search of the Public Papers of President George H.W. Bush maintained by the Bush Presidential

Library located 98 instances in 75 files in which the term *WMD* appears, although some of the documents may be duplicates. A scan of these documents indicates that the President never defined the term. The earliest document in which he used WMD as President is "Remarks at the United States Coast Guard Academy Commencement Ceremony in New London, Connecticut," May 24, 1989, accessed at <http://bushlibrary.tamu.edu/research/papers/1989/89052401.html>. NSD–70 apparently is the only National Security Council document from his administration that mentions WMD; accessed at <http://bushlibrary.tamu.edu/research/nsd/NSD/NSD%2070/0001.pdf>.

[13] *A National Security Strategy for a New Century* (October 1998), 6; accessed at <http://clinton2.nara.gov/WH/EOP/NSC/html/documents/nssr.pdf>. The December 1999 edition of that document is available at <http://clinton3.nara.gov/WH/EOP/NSC/html/documents/nssr-1299.pdf>. *WMD* appears 29 times in the Clinton administration's 1996 strategy document. See *A National Security Strategy of Engagement and Enlargement*, February 1996; available at <www.fas.org/spp/military/docops/national/1996stra.htm>.

[14] The White House, *The National Security Strategy of the United States* (Washington, DC: The White House, September 2002), 14, available at <www.whitehouse.gov/nsc/nss.pdf>.

[15] *National Strategy to Combat Weapons of Mass Destruction*. There is no definition in the 2002 National Security Strategy. The closest it comes is in a discussion of proliferation on page 14:

> In the past decade North Korea has become the world's principal purveyor of ballistic missiles and has tested increasingly capable missiles while developing its own WMD arsenal. Other rogue regimes seek nuclear, biological, and chemical weapons as well.

[16] President George W. Bush most recently extended it for an additional year on November 4, 2004. See "Notice of 4 November 2004: Continuation of Emergency Regarding Weapons of Mass Destruction," *Federal Register*, November 8, 2004, 64,637.

[17] A redacted version of the Presidential Decision Directive is available at <www.fas.org/irp/offdocs/pdd39.htm>. An unclassified summary is at General Accounting Office, *Combating Terrorism: Federal Agencies' Efforts to Implement National Policy and Strategy*, GAO/NSIAD–97–254, September 1997, 70–72.

[18] As, for example, "Letter to Congressional Leaders on the National Emergency Regarding Proliferation of Weapons of Mass Destruction," November 9, 2000, *Public Papers of the Presidents: William J. Clinton—2000*, vol. 3 (Washington, DC: U.S. Government Printing Office, 2002), 2,507; or Office of Homeland Security, *National Strategy for Homeland Security*, July 2002, available at <www.whitehouse.gov/homeland/book/nat_strat_hls.pdf>. The latter document mentions WMD more than a dozen times, but also mentions "chemical, biological, radiological, and nuclear" weapons more than three dozen times.

[19] *Dictionary of Basic Military Terms: A Soviet View*, published under the auspices of the U.S. Air Force, *Soviet Military Thought*, vol. 9, trans. DGIS Multilingual Section, Translation Bureau, Secretary of State Department, Ottawa, Canada (Washington, DC: U.S. Government Printing Office, 1976), 148.

[20] *Warsaw Pact Forces Opposite NATO* (NIE 11–14–79), January 31, 1979, National Intelligence Estimate, vol. I—Summary Estimate, 23, accessed at <http://www.foia.cia.gov>.

[21] The Soviets accepted the term in disarmament diplomacy from 1946, as evident from a review of articles in the *New York Times*. The earliest use of the term by a Soviet military official appears in Osgood Caruthers, "Soviet Aide Calls West Too Weak," *The New York Times*, February 4, 1959, 1, which quotes Marshal R. Ia. Malinovskii, Soviet Minister of Defense, using the term. It originally appeared in *Soviet Military Strategy*, ed. and trans. Marshal V.D. Sokolovskii (Englewood Cliffs, NJ: Prentice-Hall, 1963), 274. A different translation is in *Military Strategy: Soviet Doctrine and Concepts*, ed. Marshal V.D. Sokolovskii (New York: Praeger, 1963), 170. *Soviet Military Strategy* contains a footnote that quotes Marshal R. Ia. Malinovskii using the term in 1961 (page 287).

[22] "Basic Provisions of the Military Doctrine of the Russian Federation," November 1993, available at <http://www.fas.org/nuke/guide/russia/doctrine/russia-mil-doc.html>.

[23] "Text of Russian Military Doctrine," *Nezavisimaya Gazeta* (Moscow), April 22, 2000, 5–6 ["Russian Federation Military Doctrine, Approved by Russian Federation Presidential Edict of 21 April 2000"]. CEP20000424000171.

[24] Based on a search of the Public Papers of the Presidents made available by the American Presidency Project at <www.presidency.ucsb.edu/ws>. The only President who does not appear to have mentioned WMD in a speech is Gerald Ford. Excluding reports, letters, and printed messages, and counting only speeches or press conferences, instances of known use in public statements are as follows:

Truman	3
Eisenhower	2
Kennedy	4
Johnson	6
Nixon	1
Ford	0
Carter	1
Reagan	6
Bush	14

More than 200 documents in the public papers of President Clinton use WMD. This database covers only the first 6 months of the second Bush administration, but it appears he uses the term with a frequency similar to that of his predecessor. Eisenhower, Reagan, George H.W. Bush, Clinton, and George W. Bush used WMD in response to questions from journalists during news conferences. Such instances are particularly interesting because they most likely involve use or reflect words with which a President is comfortable.

[25] Based on a review of the party platforms collected by the American Presidency Project, available at <www.presidency.ucsb.edu/platforms.php>.

[26] The American Dialect Society made WMD its word (or phrase) of the year in 2002. See <www.americandialect.org/index.php/amerdial/2002_words_of_the_y>. In 2003, WMD was on the "List of Words Banished from the Queen's English for Mis-Use, Over-Use and General Uselessness," issued annually since 1976 by the Lake Superior State University. See <www.lssu.edu/banished/archive/2003.php>. YourDictionary.com made WMD one of its top 10 phrases of 2003. See <http://www.yourdictionary.com/about/topten2003.html>.

[27] Based on *New York Times* searches (1851–2001).

[28] The term *WMD* appeared in 61 stories during the first 3 months of 2005, an annual average of about 245 stories. During the late 1940s and early 1950s, stories with the term appeared about 30 times year, declining to an average of only 20 a year in the late 1950s and the 1960s. During the 1970s and 1980s, there was an average of fewer than nine stories every year. The Iraqi invasion of Kuwait, however, precipitated increased use of the term. During the early 1990s, it was used an average of more than 100 times, growing to more than 160 times a year in the late 1990s (peaking at 370 appearances in 1998).

[29] Despite this, the review is not comprehensive. While it covers the most significant alternatives from the perspective of U.S. Government policy, there are undoubtedly others that were not identified. A useful starting point for this research was a survey of alternative definitions provided by the Nuclear Threat Initiative, available at <www.nti.org/f_wmd411/f1a1.html>. Extensive investigation of Internet sources indicates that many other sites contain significant inaccuracies in their discussions of the definition of WMD.

[30] The most significant exception is Georgia (appendix D, definition 6), which considers only nuclear and radioactive weapons as WMD. Similarly, while most definitions exclude delivery systems, a few specifically consider NBC delivery systems as WMD (see appendix A, definitions 4 and 5; definitions 3 and 9 include the delivery systems only when it is impossible to separate them from the NBC payload). More typical is the usage found in the Bush administration's December 2002 *National Strategy for Combating Weapons of Mass Destruction* ("WMD and their delivery means"), suggesting that delivery systems are different but closely related.

[31] See appendix A, definitions 1 (President Bush), 2 (President Clinton), 4 (Secretary of Defense), 5 (Secretary of Defense), and 10 (Arms Control and Disarmament Agency); appendix B, definitions 1 (Public Law) and 2 (U.S. Code); and appendix C, definitions 1 (NATO), 3 (Missile Technology Control Regime), 4 (United Nations), 6 (United Nations), 7 (Soviet), and 8 (Soviet). As noted in the appendix, some of these definitions diverge from the *WMD = NBC* definition in small or large ways. Hence, definition 10 in appendix A follows a UN definition (appendix C, definition 5) that allows for the addition of new categories of weapons also capable of causing mass destruction.

[32] See appendix A, definition 7 (Department of the Army); appendix B, definition 3 (U.S. Code); appendix C, definition 5 (United Nations); and appendix D, definitions 3 (California), 5 (Florida), 8 (Indiana), 9 (Minnesota), 11 (North Carolina), 15 (Tennessee), and 17 (Vermont). Note that California amended its definition following the attacks of September 11 to include any "aircraft, vessel, or vehicle" that met certain parameters. The North Carolina definition applies only to a "nuclear, biological, or chemical weapon of mass destruction"; that state also has a separate definition for "weapon of mass death and destruction" including only conventional munitions.

[33] See appendix A, definitions 3 (Joint Staff) and 6 (Department of Homeland Security); appendix B, definition 4 (U.S. Code); and appendix D, definitions 1 (Arizona), 2 (Arkansas), 4 (District of Columbia), 7 (Idaho), 12 (Ohio), 13 (Pennsylvania), 14 (South Carolina), and 18 (Wyoming).

[34] See appendix A, definitions 9 (CIA) and 11 (Clinton Interagency); appendix C, definition 2 (NATO); and appendix D, definitions 10 (Nevada) and 16 (Utah).

[35] See appendix A, definition 8 (Chairman of the Joint Chiefs of Staff).

[36] "Standardization of Military and Associated Terminology," Department of Defense Directive 5025.12, June 30, 2004, accessed at <www.dtic.mil/whs/directives/corres/pdf/d502512_063004/d502512p.pdf>.

[37] Office of the Secretary of Defense, *Proliferation: Threat and Response*, January 2001, accessed at <www.defenselink.mil/pubs/ptr20010110.pdf>, suggests that WMD are NBC weapons plus missile delivery systems. DOD has been directed by Congress to use definitions that differ from both Joint Staff definitions, as seen with definitions 1 and 3 in table 2.

[38] The UN definition differs from CBRN by the addition of the provision allowing the international community to add categories of weapons to the list of WMD. However, the international community has regularly reviewed this issue since the late 1970s, and has yet to identify any new types of WMD. Hence, the UN definition effectively is equivalent to CBRN.

[39] Interviews with former National Security Council and DOD officials involved in drafting the document.

[40] For a comprehensive review of the Federal death penalty laws, see Rory K. Little, "The Federal Death Penalty: History and Some Thoughts about the Department of Justice's Role," *Fordham Urban Law Journal*, March 1999, 349–508. In 1972, the Supreme Court invalidated all existing Federal death penalty laws. The Federal Death Penalty Act of 1994 corrected the Constitutional defects that prevented application of most existing Federal death penalty statutes and extended the death penalty to additional criminal acts.

[41] See U.S.C. Title 18, section 2332a. Its WMD definition originally covered CBRNE, but subsequent amendments excluded chemical weapons when Congress passed the implementing legislation for the Chemical Weapons Convention. The current provision is as follows:

§ 2332a. Use of certain weapons of mass destruction

(a) Offense Against a National of the United States or Within the United States.—A person who, without lawful authority, uses, threatens, or attempts or conspires to use, a weapon of mass destruction (other than a chemical weapon as that term is defined in section 229F)—

(1) against a national of the United States while such national is outside of the United States;

(2) against any person within the United States, and the results of such use affect interstate or foreign commerce or, in the case of a threat, attempt, or conspiracy, would have affected interstate or foreign commerce; or

(3) against any property that is owned, leased or used by the United States or by any department or agency of the United States, whether the property is within or outside of the United States, shall be imprisoned for any term of years or for life, and if death results, shall be punished by death or imprisoned for any term of years or for life.

(b) Offense by National of the United States Outside of the United States.—Any national of the United States who, without lawful authority, uses, or threatens, attempts, or conspires to use, a weapon of mass destruction (other than a chemical weapon (as that term is defined in section 229F)) outside of the United States shall be imprisoned for any term of years or for life, and if death results, shall be punished by death, or by imprisonment for any term of years or for life.

[42] *United States of America*, Plaintiff-Appellee, *v. Timothy James McVeigh*, Defendant-Appellant., No. 97–1287, United States Court of Appeals for the Tenth Circuit, 153 F.3d 1166; 1998 U.S. App. LEXIS 21877; 50 Fed. R. Evid. Serv. (Callaghan) 541, filed September 8, 1998; and *United States of America*, Plaintiff-Appellee, *v. Terry Lynn Nichols*, Defendant-Appellant, No. 99–1438, United States Court of Appeals for the Tenth Circuit, 2000 U.S. App. LEXIS 33183; 2000 Colo. J. C.A.R. 6738, filed December 18, 2000.

[43] "Second Superseding Indictment as to Zacarias Moussaoui," U.S. District Court, Eastern District of Virginia, accessed at <http://notablecases.vaed.uscourts.gov/1:01-cr-00455/DocketSheet.html>.

[44] *United States of America*, Appellee, *v. Richard C. Reid*, Defendant-Appellant, No. 03–1159, United States Court of Appeals for the First Circuit, 369 F.3d 619; 2004 U.S. App. LEXIS 10453, May 27, 2004, Decided.

[45] Cases prosecuted under this act have involved possession of pipe bombs and sawed-off shotguns. *United States of America*, Appellee, *v. Lafi Khalil*, *Gazi Ibrahim Abu Mezer*, Defendant-Appellants, Docket Nos. 98–1723(L), 99–1134, United States Court of Appeals for the Second Circuit, 214 F.3d 111; 2000 U.S. App. LEXIS 11965; 54 Fed. R. Evid. Serv. (Callaghan) 1016, decided May 31, 2000, reviews an appeal of a conviction under the provisions of 2332a for possession of a pipe bomb. For an example of a prosecution involving a sawed-off shotgun, see *United States of America*, Plaintiff-Appellee, *v. Kendrick Shafer Doakes*, Defendant-Appellant, No. 03–4713, United States Court of Appeals for the Fourth Circuit, 98 Fed. Appx. 251; 2004 U.S. App. LEXIS 10731, Decided June 2, 2004.

A number of additional cases are reported in Federal Bureau of Investigation, *Terrorism in the United States, 2000–2001*, n.d., accessed at <www.fbi.gov/publications/terror/terror2000_2001.pdf>: Ronald Mike Denton was indicted for plotting to use explosives to destroy an oil refinery (18), Donald Rudolph was charged with planning to destroy propane storage tanks in California with explosives (19), and Abu Doha was charged in connection with the planned millennium bombings of aircraft flying from the Los Angeles airport (21).

[46] Examples of anthrax threats involving use of this law are *United States of America*, Appellee, *v. Christopher Martin Cole*, Appellant, No. 03–1079, United States Court of Appeals for the Eighth Circuit, 357 F.3d 780; 2004 U.S. App. LEXIS 1631, September 10, 2003, Submitted, February 4, 2004, Filed; and *United States of America*, Plaintiff-Appellee, *v. Larry D. Reynolds*, Defendant-Appellant, 03–41634, United States Court of Appeals for the Fifth Circuit, 381 F.3d 404; 2004 U.S. App. LEXIS 16474, August 10, 2004, Filed. In other cases, prosecutors used a different law, 18 U.S.C. 876, which makes it a crime to send a "communication . . . containing any threat . . . to injure the person of the addressee." See, for example, *United States of America v. Rosemary Zavrel*, Appellant, No. 03–1474, United States Court of Appeals for the Third Circuit, 384 F.3d 130; 2004 U.S. App. LEXIS 19587, January 26, 2004, Argued, September 21, 2004, Filed.

One of the rare examples in which the law was applied against individuals actually contemplating use of a WMD (as opposed to threatening with no intention of using) was the indictment of three members of the Republic of Texas, a separatist militia, for plotting to attack government officials with botulism, rabies, or anthrax. See *United States of America*, Plaintiff-Appellee, *v. Johnie Wise and Jack Abbott Grebe, Jr.*, Defendants-Appellants, No. 99–40247, United States Court of Appeals for the Fifth Circuit, 221 F.3d 140; 2000 U.S. App. LEXIS 18282, July 31, 2000, Decided. Another case involved Lawrence A. Maltz, who threatened government officials with biological, chemical, and nuclear devices, and apparently took steps to acquire the materials necessary to produce chemical agents. He ultimately pled guilty to the lesser charge of sending threatening communications. See Federal Bureau of Investigation, *Terrorism in the United States, 1998*, n.d., 6, accessed at <www.fbi.gov/publications/terror/terror1998.pdf>.

[47] At least 17 states and the District of Columbia have definitions incorporated into their criminal code (see appendix D). Of the 18 definitions identified in appendix D, 10 adopt some variation of CBRNE (except that Utah excludes any firearms). There are also six variations on CBRN (except that California also includes aircraft and certain other vehicles as WMD), one instance of a blanket reference to mass destruction with no specific mention of CBRN weapons (Nevada), and one (Georgia) that covers only weapons with radiological effects (presumably meaning both radiological and nuclear devices). At least two states adopted definitions prior to 9/11 (California and North Carolina). There is a legislative history of the California definition in Kimberly A. Felix, "Crimes: Weapons of Mass Destruction: The Changing Threat and the Evolving Solution," *McGeorge Law Review*, Winter 2003, 391–397.

[48] The Clinton administration made the Federal Bureau of Investigation (FBI) the Lead Federal Agency for crisis management in responding to a terrorist incident under the provisions of Presidential Decision Directive 39. See note 17. However, the FBI often does not use the CBRNE definition in many of its publications. For example, the 2004 FBI Strategic Plan specifically identifies WMD as equaling CBRN. Federal Bureau of Investigation, *Strategic Plan 2004–2009*, n.d., 27, accessed at <www.fbi.gov/publications/strategicplan/strategicplanfull.pdf>.

[49] Department of Homeland Security, *National Response Plan*, December 2004, 74, accessed at <www.dhs.gov/interweb/assetlibrary/NRP_FullText.pdf>. The plan explicitly adopts the definition given in 18 U.S.C. 2332a. On the other hand, the White House adopted a more traditional definition in Office of Homeland Security, *National Strategy for Homeland Security*, July 2002, which equates WMD with CBRN weapons. Similarly, the FBI has used WMD in this same way in its terrorism reports. The FBI periodic report, *Terrorism in the United States*, ostensibly an annual publication but produced only once since 2001, carefully delineated the difference between WMD terrorism (meaning involvement of CBRN weapons) and other types of terrorist violence (such as bombings). Note, for example, two excerpts from the 1999 edition of the report:

- Chemical, biological, and radiological weapons—often collectively referred to as weapons of mass destruction (WMD)—have the potential to kill large numbers of people and cause mass fear.
- WMD Cases—those cases primarily dealing with the threatened use or procurement of chemical, biological, or radiological materials with intent to harm—have shown a steady increase since 1995.

Both excerpts taken from FBI, *Terrorism in the United States, 1999, 20 Years of Terrorism, A Special Retrospective Edition*, n.d., 37, accessed at <http://www.fbi.gov/publications/terror/terror99.pdf>. The 2000–2001 edition of the report uses the term *weapons of mass destruction* only four times, and three of those are in connection with criminal indictments for activities that did not involve CBRN weapons. By comparison, the 1999 edition mentioned WMD nearly 30 times, always in the sense of CBRN except for two criminal indictments not involving CBRN weapons. See FBI, *Terrorism in the United States, 2000–2001*, n.d., accessed at <http://www.fbi.gov/publications/terror/terror2000_2001.pdf>.

[50] Joint Publication 1–02, *Department of Defense Dictionary of Military and Associated Terms* (Washington, DC: Joint Chiefs of Staff, April 2001).

[51] The definition of WMD used by the homeland security community (see the Department of Homeland Security definition [appendix A, definition 6], based on the U.S. Code [appendix B, definition 2]) includes almost all weapons used by modern ground forces with the exception of small arms. Thus, the combating WMD mission could be seen requiring responses to the armaments used in land, naval, and air warfare. Among the armaments covered by the homeland security CBRNE definition are hand grenades, antitank and antipersonnel mines, the Bradley infantry fighting vehicle, and the Abrams battle tank. Similarly, essentially every weapon carried by combat aircraft (bombs, missiles, guns) fit the definition, as do those mounted on most naval combatants (whether missiles or guns). Hence, the definition would treat most modern military forces as operators of WMD.

[52] Central Intelligence Agency, *Comprehensive Report of the Special Advisor to the DCI on Iraq's WMD* (Duelfer Report), September 30, 2004, vol. III, "Glossary and Acronyms," 15.

[53] Efforts during the 1970s to negotiate a treaty banning WMD as a category of weapons are discussed in the current essay in the section entitled "Proposed WMD Treaty."

[54] For background on the document, see Thom Shanker, "A New Strategy Document Calls Attention to the Transition Between War and Peace," *The New York Times*, May 22, 2004, A11.

[55] *National Strategy for Combating Weapons of Mass Destruction*.

[56] See the discussion in Harigel, "Introduction to Chemical and Biological Weapons," who argues that neither chemical nor biological weapons should be considered WMD based on the numbers of people actually killed by them, but that most conventional munitions should. This follows the earlier observations of the UN Secretary General, Kofi Annan, *The Millennium Report of the Secretary-General of the United Nations, "We the Peoples": The Role of the United Nations in the 21st Century* (New York: United Nations, 2000), 52.

The death toll from small arms dwarfs that of all other weapons systems—and in most years greatly exceeds the toll of the atomic bombs that devastated Hiroshima and Nagasaki. In terms of the carnage they cause, small arms, indeed, could well be described as "weapons of mass destruction."

Note the comment in the Arms Project of Human Rights Watch and Physicians for Human Rights, *Landmines: A Deadly Legacy* (New York: Human Rights Watch, 1993): "Because of the terrible toll on civilians, land mines can be considered a weapon of mass destruction in slow motion." This phrase was used nearly a decade later in 2002 in a letter to President George W. Bush from a large group of nongovernmental organizations calling on the United States to accept the Mine Ban Treaty, accessed at <www.pcusa.org/washington/issuenet/gs-020318.htm>. It is also on the Web site of the United States Campaign to Ban Land Mines at <www.banminesusa.org>. The 1997 Convention on the Prohibition of the Use, Stockpiling, Production and Transfer of Anti-Personnel Mines and on their Destruction (1997 Mine Ban Treaty) bans all antipersonnel mines.

[57] "Archbishop's Appeal: Individual Will and Action; Guarding Personality," 9. Lang was archbishop from 1928 to 1942. Karin Lion located this source using a reference found on Wordorigins.org. The use of WMD in 1937 is mentioned on other Web sites, which assert that certain unnamed British newspapers used the term in 1937, but only Wordorigins.org identified both a particular newspaper and specific date. Even it attributed the usage to the newspaper, not to the Archbishop. In contrast, on February 12, 2003, the British Broadcasting Company

(BBC) posted a report on its Web site claiming that the term WMD was used during 1937 in unspecified British newspapers, but provides no additional details; accessed at <http://news.bbc.co.uk/1/hi/uk/2744411.stm>. While the BBC may have found other uses predating the Archbishop's sermon, it provides no supporting information.

[58] Numerous Web sites assert that the use of the term in 1937 related to aerial bombing using conventional weapons, apparently copying the BBC Web site.

[59] Guernica was a Basque city town attacked by German bombers supporting Spanish Fascist forces on April 26, 1937, causing extensive destruction and much loss of life. Similarly, the Japanese bombed Chinese cities during 1937 during the Second Sino-Japanese War sparked by the so-called Marco Polo Bridge Incident on July 7, 1937. The Archbishop had close ties to senior officials in the United Kingdom (Prime Minister Neville Chamberlain was a friend) and was interested in disarmament issues. See his biography, J.L. Lockhart, *Cosmo Gordon Lang* (London: Hodder and Stoughton, 1949), 373. There is nothing in the biography, however, to suggest a deep interest in the subject. A review of the index to *The Times* (London) gives no indication that he ever addressed the bombing of Guernica, although he spoke out often about the Italian invasion of Abyssinia.

[60] The Archbishop condemned Italy's use of chemical weapons in Abyssinia during a session of the House of Lords, as reported in *The Times* (London), March 31, 1936, 8. His comments make clear that he was aware of the horrors of chemical weapons use during World War I.

[61] It was widely believed in the 1930s that a future war would invariably involve bomber attacks on cities with chemical weapons. In 1935, the British Home Office released its first Air Raid Precautions Circular and initiated a well-publicized preparedness program that focused heavily on defenses against chemical weapons. These issues are discussed in T.H. O'Brien, *Civil Defence* (*History of the Second World War*) (London: His Majesty's Stationary Office, 1955). Given the Archbishop's close ties to government officials (he had relations with successive prime ministers), it is certainly possible he knew of these views.

[62] The 1925 Geneva Protocol, which prohibited use of chemical weapons in warfare, also extended its ban to bacteriological weapons. Moreover, in 1934, a British journalist (notably a former editor of the London *Times*) reported—purportedly using German documents—that the Germans were researching biological warfare. See Martin Hugh Jones, "Wickham Steed and German Biological Warfare Research," *Intelligence and National Security* 7, no. 4 (October 1992), 379–402.

[63] This declaration is the first document reproduced in Department of State, Historical Office, *Documents on Disarmament, 1945–1969, Volume I: 1945–1956*, Publication 7008, August 1960, 1–3. It appears to have inspired the first known use of WMD in the *New York Times*. See Arthur Krock, "In the Nation: In Other Words—Truman, Attlee, King," *The New York Times*, November 16, 1945, 16.

[64] U.S. Department of State, *Foreign Relations of the United States, 1946, Volume I: General; The United Nations* (Washington, DC: U.S. Government Printing Office, 1972), 733, from the minutes of a Meeting of the U.S. Delegation to the Political and Security Committee of the UN General Assembly, January 18, 1946. Benjamin V. Cohen, Counselor, Department of State, and Advisor, U.S. Delegation to the UN, provided the explanation. He was responding to a question from "Admiral Turner" (presumably a reference to Richmond Kelly Turner). Admiral Turner, who gained prominence as an amphibious force commander in the Pacific during World War II, was then the U.S. Naval Representative to the UN Military Staff Committee. A brief account of Admiral Turner's activities at the UN appears in George C. Dyer, *The Amphibians Came to Conquer: The Story of Admiral Richmond Kelly Turner* (Washington, DC: U.S. Government Printing Office, 1972), vol. 2, 1,113–1,135.

[65] This established the UN Atomic Energy Commission at which the United States proposed the Baruch Plan for the international control of atomic weapons. UN General Assembly Resolution 1(I), January 24, 1946.

[66] See the observations in A.M. Rosenthal, "Ban on Germ Warfare by the U.N. is Unlikely," *The New York Times*, August 9, 1948, 3.

[67] General Assembly Resolution 41 was adopted on December 14, 1946. The CCA was established by Security Council Resolution 18 (1947), S/268/Rev. 1/Corr. 1, adopted February 13, 1947. For a history of the CCA, see Bernhard G. Bechhoefer, *Postwar Negotiations for Arms Control* (Washington, DC: The Brookings Institution Press, 1961), 83–94, 136–141. The CCA and the Atomic Energy Commission were disestablished and replaced by the Disarmament Commission in 1951.

[68] Commission for Conventional Armaments, UN document S/C.3/32/Rev.1, August 1948, as quoted in United Nations, Office of Public Information, *The United Nations and Disarmament, 1945–1965*, UN Publication 67.I.8, 28. It is also reproduced in "Resolution Defining Armaments," *State Department Bulletin*, August 29, 1948, 268.

[69] An account of CCA activities related to its adoption of a WMD definition can be found in the footnotes to pages 311–312 and 377–378 in Department of State, *Foreign Relations of the United States, 1948, Volume I, Part 1: The United Nations* (Washington, DC: U.S. Government Printing Office, 1975).

[70] See U.S. Arms Control and Disarmament Agency, *Documents on Disarmament 1977*, Publication 101, June 1979, 838–841. The General Assembly reaffirmed its adherence to this definition in 1999: "Determined to prevent the emergence of new types of weapons of mass destruction that have characteristics comparable in destructive effect to those weapons of mass destruction identified in the definition of weapons of mass destruction adopted by the United Nations in 1948." UN General Assembly Resolution A/RES/54/44, December 1999, "Prohibition of the development and manufacture of new types of weapons of mass destruction and new systems of such weapons."

[71] In the context of subsequent international negotiations, the Soviets clarified their position on the definition of WMD by publicly accepting the 1948 CCA definition, indicating that other countries had urged them to do so. "Statement by the Soviet Representative (Likhatchev) to the Conference of the Committee on Disarmament:

Weapons of Mass Destruction, August 9, 1977," as found in U.S. Arms Control and Disarmament Agency, *Documents on Disarmament 1977*, 498–502. The revised text of the draft treaty is found at pages 493–496.

During those same negotiations, the United States also went on record as fully agreeing with the 1948 definition. U.S. Arms Control and Disarmament Agency, *Documents on Disarmament 1977*, 512–515 (but especially 514). The British representative, speaking on behalf of 10 other countries, also cited the CCA definition in his comments to the First Committee of the General Assembly on November 7, 1977 (669–700).

[72] "Prohibition of the development and manufacture of new types of weapons of mass destruction and new systems of such weapons," UN General Assembly Resolution A/RES/51/37, December 10, 1996; "Prohibition of the development and manufacture of new types of weapons of mass destruction and new systems of such weapons," UN General Assembly Resolution A/RES/54/44, December 23, 1999; "Prohibition of the development and manufacture of new types of weapons of mass destruction and new systems of such weapons," UN General Assembly Resolution A/RES/57/50, December 30, 2002.

[73] Officially known as the Treaty for the Prohibition of Nuclear Weapons in Latin America and the Caribbean (or, more commonly, as the Treaty of Tlatelolco), the preamble includes the comment, "*Recalling* that the United Nations General Assembly, in its Resolution 808 (IX), adopted unanimously as one of the three points of a coordinated programme of disarmament 'the total prohibition of the use and manufacture of nuclear weapons and weapons of mass destruction of every type.'"

[74] The preamble to the Convention on the Prohibition of the Development, Production, and Stockpiling of Bacteriological (Biological) and Toxin Weapons and on Their Destruction contains two references to WMD. It starts by asserting, "The States Parties to this Convention, Determined to act with a view to achieving effective progress towards general and complete disarmament, including the prohibition and elimination of all types of weapons of mass destruction, and convinced that the prohibition of the development, production and stockpiling of chemical and bacteriological (biological) weapons and their elimination, through effective measures, will facilitate the achievement of general and complete disarmament under strict and effective international control." A subsequent phrase avers that "*Convinced* of the importance and urgency of eliminating from the arsenals of States, through effective measures, such dangerous weapons of mass destruction as those using chemical or bacteriological (biological) agents."

[75] The first paragraph of the preamble to the Convention on the Prohibition of the Development, Production, Stockpiling and Use of Chemical Weapons and on Their Destruction includes the phrase: "The States Parties to this Convention, *Determined* to act with a view to achieving effective progress towards general and complete disarmament under strict and effective international control, including the prohibition and elimination of all types of weapons of mass destruction."

[76] For a history of the treaty negotiations, see Raymond L. Garthoff, "Banning the Bomb in Outer Space," *International Security* 5 (Winter 1980/1981), 25–40.

[77] The Soviet Union apparently feared that the Western bloc was trying to limit development of intercontinental ballistic missiles, which was an area of Soviet strategic advantage over the West, and was resistant to Western demands for intrusive inspections to ensure treaty compliance.

[78] The original treaty text, proposed by the Soviet Union, would have imposed "a ban on the use of cosmic space for military purposes." See Department of State, Historical Office, *Documents on Disarmament, 1945–1959, Volume II: 1957–1959*, Publication 7008, August 1960, 973–977 and 1,228–1,230, especially the footnotes.

[79] Dwight D. Eisenhower, "Address Before the 15th General Assembly of the United Nations, New York City, September 29th, 1960," available at <www.presidency.ucsb.edu/ws>.

[80] John F. Kennedy, "Address in New York City Before the General Assembly of the United Nations, September 25th, 1961," available at <www.presidency.ucsb.edu/ws>.

[81] United States Arms Control and Disarmament Agency, *Documents on Disarmament 1962*, vol. I: January-June, Publication 19 (Washington, DC: U.S Government Printing Office, November 1963), 360.

[82] "Kennedy to Tour Space Facilities," *The New York Times*, September 6, 1962, 16.

[83] *Foreign Relations of the United States, 1961–1963, Volumes VII, VIII, IX, Arms Control; National Security Policy; Foreign Economic Policy–Microfiche Supplement* (Washington, DC: Department of State, 1997), documents 222 and 223.

[84] The contentiousness of the Senate debate over the Test Ban Treaty made President Kennedy hesitant to negotiate another potentially controversial treaty and led him to favor this alternative approach.

[85] Lyndon B. Johnson, "Statement by the President on the Need for a Treaty Governing Exploration of Celestial Bodies," May 7, 1966, available at <www.presidency.ucsb.edu/ws>.

[86] U.S. Senate, Committee on Foreign Relations, "Treaty on Outer Space," hearings before the 90th Congress, 1st session (Washington, DC: U.S. Government Printing Office, 1967), 23. The question was asked again by another Senator, Frank Carlson (R–KS), and Ambassador Goldberg responded, "This is a weapon of comparable capability of annihilation to a nuclear weapon, bacteriological. It does not relate to a conventional weapon" (76). According to Ambassador James Leonard, Ambassador Goldberg was a brilliant negotiator but often careless of details. Leonard was told that Goldberg's testimony was replete with factual and legal errors. James Leonard, telephone interview with author, February 16, 2005.

[87] "Treaty on Outer Space," 100.

[88] See the full text of the treaty at < http://www.state.gov/t/ac/trt/5187.htm#treaty>.

[89] See Robert Lambert and John Syphax, *International Negotiations on the Seabed Arms Control Treaty*,

Publication 68 (Washington, DC: U.S. Arms Control and Disarmament Agency, May 1973). Its narrative draws primarily on publicly available documents, including many that appear in various editions of U.S. Arms Control and Disarmament Agency, *Documents on Disarmament* (Washington, DC: Arms Control and Disarmament Agency, various dates). Especially important for this discussion were *Documents on Disarmament 1968*, Publication 52, September 1969, 824–827; and *Documents on Disarmament 1969*, Publication 55, August 1970, 746–749. Essential are the documents that appear in Department of State, *Foreign Relations of the United States, Johnson Administration, Volume XI: Arms Control and Disarmament* (Washington, DC: U.S. Government Printing Office, 1997), available at <http://www.state.gov/www/about_state/history/vol_xi/index.html>. The volumes in this series covering the Nixon administration have not yet been published. An insider's account of the negotiations was provided by Edward Wenk, *The Politics of the Ocean* (Seattle: University of Washington Press, 1972), 288–293.

[90] Lyndon B. Johnson, "Message to the Eighteen-Nation Disarmament Committee on Its Reconvening in Geneva, July 16th, 1968," available at <www.presidency.ucsb.edu/ws>.

[91] U.S. Senate, Committee on Foreign Relations, "Seabed arms control treaty," hearing before the 92d Congress, 2d session, on EX. H.92–1, January 27, 1972 (Washington, DC: U.S. Government Printing Office, 1972), 22.

[92] The extract is from Article IX. The agreements formal name was Treaty Between the United States of America and the Union of Soviet Socialist Republics on the Limitation of Strategic Offensive Arms.

[93] Accessed at <http://www.state.gov/www/global/arms/treaties/salt2-2.html>.

[94] The treaty negotiators also addressed how to deal with new, nonnuclear strategic weaponry, a question related to the "weapons developed in the future which have characteristics comparable in destructive effect to those of the atomic bomb or other weapons mentioned above" in the 1948 UN definition. According to the Second Agreed Statement, "The Parties agree that, in the event of the emergence in the future of a new kind of arm that one Party considers could be a new kind of strategic offensive arm, that Party shall have the right to raise the question of such an arm for consideration by the Joint Compliance and Inspection Commission in accordance with subparagraph (c) of Article XV of the Treaty." See the Agreed Statements Annex found at <www.state.gov/documents/organization/27361.pdf>. Marshall Brown brought this provision to the author's attention.

[95] *United Nations treaties and principles on outer space, Addendum: Status of international agreements relating to activities in outer space as at 1 January 2004*, ST/SPACE/11/Add.1/Rev.1, February 2004.

[96] See, for example, Kevin V. Cook, "NOTE: The Discovery of Lunar Water: An Opportunity to Develop a Workable Moon Treaty," *Georgetown International Environmental Law Review* 11 (Spring 1999), 647–704.

[97] A summary of the negotiations discussed here is given in Department of Political and Security Council Affairs, UN Centre for Disarmament, *The United Nations Disarmament Yearbook, Volume I: 1976* (New York: United Nations, 1976), 201–209.

[98] UN General Assembly Resolution 3479 (XXX), December 11, 1975.

[99] U.S. Arms Control and Disarmament Agency, *Documents on Disarmament 1978*, Publication 107, October 1980, 420.

[100] The issue appears every year in the review of Conference on Disarmament (CD) deliberations. The last time the CD reported substantively was in the context of the report of the 1992 Conference on Disarmament sessions, summarized in paragraphs 89–92 of CD/1173.

[101] There was a subsequent failed effort to negotiate a treaty to ban radiological weapons. Although the United States and the Soviet Union agreed on a joint approach, the two superpowers were unable to convince the Committee on Disarmament to give priority to their initiative. The report of the Ad Hoc Working Group on Radiological Weapons to the Committee on Disarmament, August 8, 1980, in U.S. Arms Control and Disarmament Agency, *Documents on Disarmament 1980*, Publication 116, December 1983, 355–358, discusses some of the problems that prevented the international community from reaching a consensus on pursing a treaty.

[102] UN Security Council, "Note by the President of the Security Council," S/32500, January 31, 1992, accessed at <http://projects.sipri.se/cbw/docs/cbw-unsc23500.html>.

[103] S/RES/1540 (2004), adopted April 28, 2004. While the resolution did not define WMD, it did define delivery systems ("for the purpose of this resolution only"): "missiles, rockets, and other unmanned systems capable of delivering nuclear, chemical, or biological weapons, that are specially designed for such use."

[104] UN General Assembly Resolution, A/RES/50/70, December 12, 1995 (section C).

[105] UN General Assembly Resolution, A/RES/51/37, December 10, 1996.

[106] Text of the guidelines is available at <www.mtcr.info/english/guidetext.htm>.

[107] The agreement with Croatia was signed June 1, 2005; the one with Liberia was signed on February 11, 2004; the Marshall Islands agreement was signed August 13, 2004; and the one with Panama was signed May 12, 2004. The text of the agreements, and short fact sheets describing them, are available at <www.state.gov/t/np/c12386.htm>.

[108] Memorandum from Commander, U.S. Strategic Command, Subject: Establishment of United States Strategic Command (USSTRATCOM) Center for Combating Weapons of Mass Destruction (SCC), August 26, 2005, SM# 218–05.

About the Author

Dr. W. Seth Carus is deputy director of the Center for the Study of Weapons of Mass Destruction and a distinguished research fellow at the National Defense University. His research focuses on homeland security, biodefense, biological warfare threat assessment, and the role of the Department of Defense in responding to chemical and biological terrorism. He also is researching allegations of biological agent use by terrorists and criminals and has written a working paper, "Bioterrorism and Biocrimes: The Illicit Use of Biological Agents in the 20th Century," and several articles on that subject. From 2001 to 2003, Dr. Carus was detailed to the Office of the Vice President, where he was the senior adviser to the Vice President for Biodefense. From 1991 to 1994, Dr. Carus was a member of the Policy Planning staff in the Undersecretary of Defense for Policy, Office of the Secretary of Defense. Before joining the Federal Government, he was a research fellow at the Washington Institute for Near East Policy. Dr. Carus received his PhD from The Johns Hopkins University in Baltimore, Maryland.

JOHN F. REICHART
Director

STAFF

W. SETH CARUS
Deputy Director

JOHN P. CAVES, JR.
Senior Research Fellow

REBECCA K.C. HERSMAN
Senior Research Fellow

RICHARD A. LOVE
Research Fellow

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