Taking Sovereignty Out of This World:

Space Weapons and Empire of the Future*

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November 2007


* We thank Tarak Barkawi, Michael Barnett, Daniel Deudney, Penny Griffin, Ayten Gundogdu, Brian Job, Ronald Krebs, Richard Price, Aaron Rapport, Karthika Sasikumar, James Tully and the two anonymous referees for helpful comments on earlier drafts of this paper. We presented this paper at the annual meetings of the International Studies Association, San Diego, March, 2006, at the Centre of International Relations at the University of British Columbia, Vancouver, November 2006, and at the Minnesota International Relations Colloquium at the University of Minnesota, Minneapolis, March 2007. We also thank The College of Liberal Arts, University of Minnesota, Graduate
Research Partnership Program and the Canadian Department of National Defence Security Defence Forum for providing financial support for the completion of this project.
Introduction

On August 31, 2006 President Bush authorized a new National Space Policy that called on the Secretary of Defense to “maintain the capabilities to execute the space support, force enhancement, space control and force application missions” and to “develop capabilities, plans, and options to ensure freedom of action in space, and, if directed, deny such freedom of action to adversaries.” In addition the new policy states that “The United States will oppose the development of new legal regimes or other restrictions that seek to prohibit or limit U.S. access to or use of space. Proposed arms control agreements or restrictions must not impair the rights of the United States to conduct research, development, testing, and operations or other activities in space for U.S. national interests.”

This document signals an extension of the doctrine of American exceptionalism into a new geopolitical frontier – orbital space. The U.S. demands the right to be unimpeded in any of its activities in space, up to and including those that would involve weapons systems, but it reserves the right to deny other states – particularly adversaries - an equal amount of freedom of operation.

Resisting the impulse to smirk contemptuously, or perhaps to laugh derisively, at the incredible arrogance of power represented in this policy, it is incumbent on us to treat such pronouncements seriously. They are, after all, expressive of a new geopolitical vision that is currently being actively pursued through the commitment of substantial resources. Coming on the heels of this new National Space Policy was China’s Anti-Satellite Weapons (ASAT) test on January 11 2007. China’s actual motive in conducting this test remains unclear. Nevertheless, the test has strengthened the hand of more hawkish members of the U.S. defense policy community. They have argued that in light of China’s ASAT test the U.S. must accelerate its space weapons program so as to protect current U.S. space dominance.
For example, Ashley Tellis has argued, “the United States has no choice but to run and win this offense/defense space race if it is to uphold its security obligations in East Asia and elsewhere and deter increased Chinese investment in counter-space operations.” As such, China’s Anti-Satellite Weapons Test only seems to have accelerated the U.S. defense establishment’s plan of seizing geopolitical control of orbital space under such rubrics as ‘missile defense’, ‘space control’, and ‘force application from space’. In the strategic planning of the U.S. government space weapons, then, are no longer just a fantasy, an unrealizable fiction. They are seen as a very real (even relatively short-term) possibility, and, for the U.S., a strategic necessity. In this article, we inquire into the global political implications if that possibility were actualized. Specifically, we ask, how will the deployment of weapons in orbital space affect the structure and character of modern international relations?

The paper opens with a general consideration of theoretical premises, both substantive and methodological, that inform our analysis. Substantively, we assume that technologies and cartographies of political killing have substantial political consequences. For this, we build on insights in the work of historical sociologists, especially Charles Tilly, and work by early international relations theorists, particularly John Herz and Hans Morgenthau. In very different ways, these thinkers argued that shifts in military technology (along with other processes) generate changes in the forms of political societies (for example, the consolidation of sovereign states in late-medieval Europe) and in the nature of relationships among them (for example, the possibility of interstate warfare in a context of nuclear weapons). We extend that line of thinking and focus on constitutive effects that emerging space-weapons technologies will likely have on the ontology—the social being—of the political societies that compose the international system, which, in the modern era, is to
say on sovereignty. The first section also addresses briefly a methodological premise of our argument, that (likely) constitutive effects in the future can be analyzed through the discernment of structural logics revealed in the present. In asking what kinds of subjects are logically produced by specific forms of structured social relationships, we are engaged in a variety of constitutive analysis. This premise enables us to analyze constitutive effects of not-yet-realized weapons developments. Finally, we present and very briefly defend one additional substantive assumption—that the United States, alone, is apt to develop an effective space weapons project.

We turn, in the second section, to the empirical ground for our analysis. We identify and briefly describe three types of space weapons programs currently being pursued by the U.S.: space-based missile defense, space control, and force application from orbital space. In discussing these programs, we argue that existing literature tends to ignore important questions about the consequences of space weapons, focusing instead on issues of their technical feasibility and tactical utility. Where consequences are considered, they are almost always cast in terms of causal effects on strategic interaction, particularly impacts on power-balancing behavior (e.g. space arms racing) or cooperation (e.g. collaborative security). While acknowledging the importance of those questions, our concern is the constitutive effects of space-based military technologies on world political order, particularly its foundational ontology, sovereignty.

In the third section, we develop the primary argument of the paper: space weapons under the control of a single state logically constitute a new structure of imperial power through the counteracting forces of centralization of sovereign power and de-territorialization of sovereignty. Specifically, we explore the constitutive effects of each of the three types of space weapons discussed in section two. As many critics have argued, space-based missile defense
undermines the logic of deterrence by simultaneously re-inscribing the territorial borders of the United States and stripping from all other states the ability to deter attacks from the United States through missile-based retaliation. Space control, in denying potential adversaries access, privatizes the commons of orbital space for (U.S.) commercial and strategic interests, thereby expanding the frontier of American empire into low-earth orbit. Finally, force application from space enables the U.S. as sole possessor of such weapons to project lethal force to any target, at any location on Earth, on very short notice. In addition to exploring the constitutive effects of each of these specific space weapons programs separately, we consider, most importantly, their conjoint effects in constituting a new, historically unprecedented, type of global political rule, which is simultaneously centralized but de-territorialized sovereignty—empire of the future.

In the final section of the paper we conclude with a consideration of two types of implications of our constitutive analysis. First are implications for currently influential theories of empire and imperialism, which in our view should be revised to accommodate the constitutional logic of empire of the future. Second are implications for the possible—and the desirable—modes of resistance to this emerging imperial form. We wish to be clear that we are neither technological determinists, nor do we believe that the constitutive logics of such weapons are so overpowering as to prevent any possibility of resistance. Just as other military technologies, such as airpower and precision-guided munitions, have proven vulnerable to low-technology strategies aimed at neutralizing their efficacy, space-based weapons systems may also be vulnerable to similar counter-measures. With that in mind, but also cognizant of the inordinate capacity of the possessor of space weapons to counter opposition, our paper concludes by examining how resistance and insurgency might be practiced in anticipation of and under a future global regime of space-based empire.
I. Theoretic Premises

Modes of political killing matter

Scholars and practitioners have long recognized that technologies of destruction and economies/cartographies of violence affect the form and character of relations within and among political societies. A substantial literature on the war-inducing/war-preventing effects of offensive versus defensive military balances provides testimony to that recognition, as do arguments commonplace in realist theory that changes in military technology can bring about changes in the distribution of power and, in turn, often violent international systemic change. These lines of thought, and others, assume that the dynamics of political interaction and even systemic structure of international relations are causally affected by the availability and use of technologies of violence.

The significant effects of modes of political killing, however, are not limited to causally shaping social-political relations of stability and instability within and among existing political societies. Effects can be in terms of constitutive processes, as well. Technologies of destruction and economies/cartographies of violence are, in part, constitutive of what political society is. That is to say, modes of political killing are productive of political subjects. Research by Charles Tilly and others on the development of the modern states-system rests on and expresses this point. In this highly influential interpretation, the modern, territorial state was socially constituted and produced as the dominant form of political society in relationship to and through newly emerging technologies of destruction and economies/cartographies of violence (in conjunction, of course, with other processes). On a different register, Alexander Wendt’s argument about teleology and the inevitability of a world state rests on an assumption that endogenously changing technologies and economies of violence alter what it means to be a state seeking security in relation to other states.
If the constitutive effects of modes of political killing are to be adequately theorized with respect to the changing subjectivity of the dominant form of political society in the contemporary era, a central issue must concern consequences for the constitution of sovereignty. Regrettably, few scholars have addressed that crucially important question. A significant exception is the strand of political realism that Daniel Deudney labeled “nuclear one worldism”.\textsuperscript{xv} That tradition, initiated by Hans Morgenthau and especially John Herz early in the nuclear era, offered an incisive argument about nuclear weapons’ de-territorializing effects on states.\textsuperscript{xvi} Herz begins with the assumption that “Throughout history, that unit which affords protection and security to human beings has tended to become the basic political unit; people, in the long run, will recognize that authority, any authority, which possesses the power of protection”\textsuperscript{xvii} In his view, the power of protection is completely eroded by nuclear weapons. The state loses its “hard shell” of defensibility, and with it the foundations of its sovereignty. For Herz, nuclear weapons conjoined with air warfare capabilities mean that “Whatever remained of the impermeability of states seems to have gone for good”,\textsuperscript{xviii} because even the possibility of their use “obliterate[s] the very meaning of unit and unity, power and power relations, sovereignty and independence”.\textsuperscript{xx} Succinctly put, “the meaning and function of the basic protective unit, the ‘sovereign’ nation-state itself, have become doubtful”.\textsuperscript{xx}

As Deudney points out, this initially influential argument has mostly fallen out of favor with the passage of time, as the horrific potential of nuclear war has receded in political imaginaries, and as a different strand of realist thought emphasizing the stabilizing effect of nuclear deterrence has become widely accepted. According to the latter view, which Deudney labels “deterrence statism,” nuclear war can be, and is, deterred by the
assurance of mutual destruction. This deterrent effect serves to re-inscribe the territorial integrity of sovereign state authority. But as Deudney argues

The current near consensus among international relations theorists that the state has weathered the nuclear revolution could turn out to be as far off the mark as the widely held view, proclaimed by Zbigniew Brzezinski in 1986, that the US-Soviet rivalry was ‘an effectively permanent feature of world politics.’ In short, the simplest nuclear one world scenario of ‘after the deluge, the covenant’ retains a residual credibility that forbids us from ever completely dismissing it.xxi

That “residual credibility,” Deudney believes, should and can be given new theoretical life if a more complex appreciation of the forms and effects of military technologies is developed than that provided by the “nuclear one worldists,” and if a fuller theorization is offered of the constitution of political societies/political subjects.

We take up that challenge, extending but appreciably modifying the “nuclear one worldist” basic insight, by asking how orbital space weapons have significant constitutive effects on sovereignty, constitutive of a new political form: empire of the future.

Constitutive analysis of future effects

In examining constitutive effects scholars ask how structured social relations, such as systems of signification (Foucaultian discourses), and the processes of their (re-)production constitute what a referent object is as a social kind. To engage in constitutive analysis, then, is to investigate the social determination of the ontology of a being or form.xxxii Our concern, however, is with not-yet-realized social beings and social forms of the future. How does one analyze the social constitution of that which does not yet exist? The answer, we maintain, lies in examination of the structural logics of social production. Structured social relations
entail (often very powerful) reproductive logics, the constitutive implications of which can be discerned even prior to their effectuation. Those constitutive implications are structural potentialities and tendencies—likelihoods—not determinant products, of course. But to the extent that operative reproductive logics of generative structures are strong, future constitutive effects can be identified with some degree of confidence. This is precisely the character of Marx’s analysis of capital, as well as Wendt’s argument about teleology and the inevitability of a world state and Herz’s argument about the loss of the state’s “hard shell”.

U.S. singularity

Lastly, we assume that, if a project of placing weapons in orbital space is achieved, it is likely to be accomplished firstly, and quite possibly solely, by the United States. We emphasize the word, if, because the feasibility of space weapons is far from decided. But we also recognize that there are military strategists who are already designing missions for such space-based weaponry. And, by all publicly available indications, the U.S. is far ahead in their development. Consequently, if the U.S. military can overcome the obstacles of cost and launch technology, as many in the security community now believe possible, then it seems likely that within the next ten to twenty years the U.S. will deploy weapons in space. If it is successful in doing so, the fact that part of its stated project is to deny access to orbital space assets to potential enemies implies that the U.S. might well establish itself as the sole, or pre-eminent, actor in respect to space weapons. Accordingly, we focus our analysis in this paper on that situation. While we concede that either a competitively balanced multi-actor arms race or a multi-national collaborative process in space weapons is possible and worthy of analysis, we limit our focus to the plausible scenario of U.S. singularity.
II. The Project of Space Weaponization

On the near horizon lie three potential military uses of orbital space. The first, which has been a U.S. pursuit since at least the 1980s, is intercepting missile attacks — a space-based missile-defense shield. Second, there is serious discussion of developing “space control,” which the U.S. Department of Defense defines as “the exploitation of space and the denial of the use of space to adversaries.” A third is force application from space: weapons of varying types (discussed briefly below) would be placed in orbit, with the ability to attack objects either flying in the Earth’s atmosphere or on or near the Earth’s surface (including even under ground or under water).

In order to deploy these three forms of space weapons, the U.S. will need to develop new military technologies. To achieve “space control”, technology capable of destroying the satellites of rivals and protecting one’s own satellites is necessary. Missile defense requires the placement in orbit of interception technologies capable of disabling ballistic missiles in the boost phase. Force application necessitates the development of space-based lasers and kinetic-energy bombs to launch attacks from space against targets on Earth.

Anti-satellite technology already exists to some extent, in as much as a state with ballistic missile technology could launch a warhead into orbit and detonate it near a targeted satellite. Current advances in micro-satellite technology and space robotics, however, are making it easier to disable or destroy satellites. For example, in 2005 the U.S. Air Force launched an XSS-11, a satellite the size of a dishwasher weighing only 100 kilograms. This satellite has the ability to meet other satellites in orbit, thereby potentially disabling or destroying them. The proliferation of such technologies means that it is becoming increasingly likely that military operations in the future could be carried out against the satellite systems of rivals.
Kinetic-energy weapons, such as hypervelocity tungsten rod bundles, use the force of a collision to destroy a target either in space/entering space or on Earth. Alternative and complementary to kinetic-energy weapons are space-based high-energy laser systems. While laser technology has existed since the 1960s, only recent advances have made it possible to produce sufficiently powerful lasers to be used as weapons. The U.S. Army has successfully demonstrated the ability of a ground-based laser to destroy rocket shells in flight, and the United States Air Force has mounted an airborne laser on a modified Boeing 747 capable of destroying ballistic missiles in the boost phase. Furthermore, the Air Force and the Ballistic Missile Defense Organization are collaborating on the Integrated Flight Experiment, which plans to launch a space-based laser to destroy a ballistic missile between 2010 and 2012. While the initial purpose of developing space-based lasers is missile defense, it will be possible to modify the technology, once in place, so that lasers can destroy ground-based targets as well. A system of relay mirrors in space could work from a laser based on the land, sea, air, or in space to attack any point able to be targeted by mirror reflection. This laser system would be capable of nearly instantaneously attacking anyplace on the Earth.

There are major obstacles to the realization and effectiveness of these weapons systems, we readily acknowledge. A major challenge concerns questions of technical feasibility of space weapons, an issue on which much scholarly and policy literature has focused since the initial SDI debates. Critics have also attacked proposals on several grounds in addition to questionable technical attainability, including the program’s cost and the likelihood that it will spark new arms races or increase threats to the U.S. Some argue, for example, that the very effort to place weapons in space, whether feasible or not, may have the unintended consequence of making the United States less secure, as rival states, particularly China and Russia, might respond in kind. While critics often emphasize such
power-balancing concerns, Deudney argues, in contrast, from a republican federalist perspective that a collaborative outer space regime for such public goods as protecting Earth from collisions with large asteroids, in which states would treat orbital space in a manner similar to Antarctica, could lead to planetary communal security.

These debates about obstacles to and effectiveness of space weapons are of great importance. They merit far more serious attention than they have received, because these matters have not yet been definitively settled. But existing debates have their limitations and blinders. Specifically, when their participants turn beyond issues of technical feasibility and cost to consider possible effects, the focus is overwhelmingly on consequences for strategic interaction among already sovereign states. How space weapons, if successfully deployed, will likely affect the ontology of the states system remains largely unexamined. We believe that that question is of crucial importance as well, and it is to it that we direct our attention.

III. Space Weapons, Sovereignty, and the Constitution of Empire

Our argument, in simple terms, is that the militarization of space reconstitutes and alters the social production of political society globally in three interlocked ways that are rooted respectively in the three forms of deploying technologies/cartographies of violence in orbital space identified in the previous section: missile defense; space control; and force application. The conjoint effect of those three technologically induced processes of reconstitution is to substitute the consolidation of an extra-territorial system of rule—which we refer to as empire of the future—for the competitive sovereignties of the modern states-system.

Missile defense
The first weapons in space will probably be deployed for missile defense. The U.S. military is testing several prototypes of components of such a system, one of which, the MDA Space Test Bed, is slated to receive funding in 2008, with the aim of integrating already existing space technologies into a system that, from orbital space, can intercept ballistic missiles in their boost phase. Such a system, when/if highly effective, replaces mutual deterrence with the singular U.S. capability (perhaps extended to allies) to launch unilateral pre-emptive and preventative attacks freed from concerns of retaliation through ballistic missile counter-attacks. The missile defense system now envisioned by the U.S. thus undermines the logic of mutual deterrence. States not included under its umbrella become increasingly vulnerable to (even nuclear) attack by the state that controls it.

The sovereignty of a state is conceptually and practically linked to its ability to maintain territorial integrity by deterring enemies from attacking. During the Cold War, the deterrent effect of nuclear weapons was acknowledged as a primary means by which ‘great power’ states in conflict protected their territorial integrity, and, in turn, their sovereignty. Kenneth Waltz argued that the proliferation of nuclear weapons would extend deterrent effects to otherwise not-yet ‘great powers’, thereby strengthening the security of larger numbers of sovereign states and stabilizing the international system. Following the logic of Herz’s nuclear ‘one-worldism’, an effective missile defense system, by contrast, will strip states of whatever “hard shell” of territorial defensibility that had been or might be provided by mutual deterrence. The realist argument that has largely carried the day for the past half century in critical response to Herz (that the deterrent effect of mutual assured destruction of two states possessing nuclear weapons re-inscribes territorial state sovereignty) accordingly is brought into doubt. If the U.S. were to develop a sufficiently sophisticated missile defense shield, the de-territorializing effect on the sovereignty of other states would
be precisely those that Herz forecasted—their “hard shell” of defensibility would be lost. There would be a significant twist, however, because, for the U.S., control of an effective missile defense system would markedly re-inscribe its territorial “hard shell” and its sovereignty in exclusively shielding it from the threat of (missile-based) attack by others. The sovereignty of one state is re-inscribed, while that of other states, most notably ‘great powers’ that have depended thus far on their deterrent capacities, is eroded.

**Space control**

The doctrine of space control has emerged out of the belief that assets in space represent a potential target for enemies of the U.S.\textsuperscript{xxix} There are two kinds of vulnerable U.S. assets: private-commercial; and military. One concern is that rivals may attack commercial satellites, thereby disrupting the flow of information and inflicting significant harm on global markets.\textsuperscript{x} Militarily, the concern is that, through increasing reliance on satellites for Earth-based military operations, the U.S. has created an “asymmetrical vulnerability”. An adversary (including a non-state, “terrorist” organization) could effectively immobilize U.S. forces by disabling the satellites that provide communication, command, and control capabilities. Consequently, the project of space control is designed to protect commercial and military satellites from potential attacks. Its broader purpose, however, is to prevent rivals from having any access to space for activities antithetical to U.S. interests; this is the imperative for “denial of the use of space to adversaries”. Thus space control has dual functions—it is both a privatizing of the commons of orbital space and a military exclusion—in a form of “inclusive exclusion”.\textsuperscript{xli}
Space control represents the extension of U.S. sovereignty into orbital space. Its implementation would reinforce the constitutive effect identified in the previous section on missile defense, namely to re-inscribe the “hard shell” border of the U.S., now extended to include the “territory” of orbital space. U.S. sovereignty is projected out of this world and into orbit. Under Article II of the 1967 *Outer Space Treaty*, “Outer Space, including the moon and other celestial bodies, is not subject to national appropriation by claim of sovereignty, by means of use or occupation, or by any other means”. The U.S. project of space control would entail a clear violation of this article.\textsuperscript{xlii}

In addition to expanding the scope of U.S. sovereignty, however, this violation of international law has a second constitutive effect of importance, namely to produce a distinctly capitalist sovereignty. In Volume One of *Capital*, Marx chided classical political economists for their inability to explain how workers became separated from the means of production. Whereas political economists such as Adam Smith argued that a previous accumulation of capital was necessary for a division of labor, Marx argued that this doctrine was absurd. Division of labor existed in pre-capitalist societies where workers were not alienated from their labor. Instead, Marx argued that the actual historical process of primitive accumulation of capital was carried out through colonial relations of appropriation by force.\textsuperscript{xliii} While not a perfect analogy, because of the lack of material labor, the value of which is to be forcibly appropriated *in* orbital space, space control is like such primitive accumulation in constituting a global capitalist order through the colonization of space as previously common property. One of the purposes of the 1967 *Outer Space Treaty* was to preserve a commons where all states, regardless of technical ability or economic or military power, could participate in the potential benefits space has to offer. In the years since this treaty was signed, the primary economic use of space has been for commercial
communications satellites. This industry has expanded dramatically in the last two decades. Total revenues for commercial space-related industries in 1980 were $2.1 billion; by 2003 this figure had expanded to $91 billion and it was expected to increase at least as rapidly into the foreseeable future.\textsuperscript{xlv} Space control is about determining who has access to this new economy. Positions in orbit for satellites are a new form of “real estate”. By controlling access to orbital space the U.S. would be forcibly appropriating the orbits, in effect turning them into primitively accumulated private property.\textsuperscript{xlv} In this way, the U.S. becomes even more than it is now the sovereign state for global capitalism, \emph{the global capitalist state}.  

\textbf{Force application from orbital space}  

Force application entails using weapons either based in space or deployed through space to attack targets on Earth or within Earth’s atmosphere. Such weapons systems (other than missiles) are many years off, but substantial research is being conducted, and military strategists are already discussing how they might be used.\textsuperscript{xlvii} The major advantage of space-based weapons is that they can attack any point extremely quickly. Additionally, it is very difficult to defend against them. They become the violent parallel to the surveillance panopticon. In order to investigate the constitutive effects on sovereignty of force application from outer space, we need to look at two aspects of these weapons: technical (what they can do); and tactical (how they would be used).\textsuperscript{xviii}  

Technically, the two types of force application weapons systems currently envisioned, laser-energy and kinetic-energy, have different features. Laser weapons would take only seconds to deploy, and they could reach any target on or near Earth instantaneously and very precisely. They are not very destructive, however, and as such would not be very useful against large-scale and/or heavily shielded targets. Kinetic-energy weapons, in contrast, have the potential to deliver very destructive force, even well below the
Earth’s surface (in deep bunker-busting). They would take a few hours to deploy, however. While they could also be designed to attack any point on earth, they are only useful against fixed targets, because of deployment lag-time. In addition to laser and kinetic-energy systems, conventional weapons, such as bombs and missiles, might also be placed in space. They would occupy a middle ground. It would take approximately ten minutes to launch them and they could attack any targets that technically-similar earth-based weapons do.

The tactical advantages are obvious. Their tremendous range would enable space-based weapons to reach targets that other weapons cannot, and because they are based in orbital space there are no concerns about violating the airspace of other states in transit. They could also be used on very short notice, in contrast to the days to weeks typically required to deploy Earth-based weapons, such as airplanes, ships, or troops. Their major drawback is cost, both for development and for placing in orbit. As such, they would likely have limited use, particularly if other weapons and tactics can accomplish the same mission for lower cost. Why, for instance, would the military use a kinetic-energy weapon orbiting in space against a target when a similar result could be produced by a cruise missile or a bomb? Thus, to repeat, the prime advantage of these weapons is their ability to be used very quickly against targets that are out of the reach of other weapons.

In what kind of military operations, then, would space-based weapons for force application be useful? Military analysts have speculated on just such questions:

Alternatively, a space weapon might be the weapon of choice for an otherwise lower-value target if the space weapon were the only choice available in time, particularly for a time critical political effect. For example, a locomotive might not be worth a space-delivered smart munition. However,
it might be well worth the use of a space-delivered smart munition to target a
locomotive pulling a train full of people forced from their homes for
transport to the border or to a concentration camp at the beginning of an
ethnic cleansing campaign – particularly if aircraft and helicopters cannot
reach the train because air defenses have not been suppressed, basing and
overflight rights have not been granted, or coalition consensus on the action
has not been reached.\textsuperscript{li}

This scenario is fascinating for the political logic at work within it—force application from
space is required to attack an otherwise inaccessible target. All three reasons stated for
inaccessibility involve potential gaps in U.S. capacity to project its power globally. Either the
defenses of the target country have not been suppressed, or other states have not consented
to let U.S. forces fly through their airspace, or other coalition members—presumably in
NATO or the UN—have not consented to the action. What places targets “out of reach” in
this scenario, then, is the sovereignty of other states as exercised through their abilities to
defend their territory, control their airspace, and/or participate (jointly) in authorized
decision of the (global) exception to international law.

As Schmitt has argued with respect to domestic law, the sovereign is constituted
through the capacity to decide the exception to the application of law in a moment of
危机.\textsuperscript{lii} The effect of space weapons for force application is to erase that sovereignty—
states are constituted as subjects lacking authorization of decision, and lacking a boundary
effectively demarcating inside from outside. While other weapons systems can be used to
intervene in affairs within a state’s borders, their constitutive logic (with the possible
exception of nuclear and some forms of biological weapons) is not, per se, corrosive of
sovereignty, because in principle, even if not in every instance, they can be defended against.
Precision space-based strikes happen so rapidly, however, that a defensive response is not possible. As such they strip states of the defensive “hard shell” that, classical realists argued, is constitutive of sovereignty. All three justifications thus buttress the exclusive capacity of the U.S. to “decide the exception” globally, while diminishing, by circumvention, the sovereignty of other states. The hypothetical use of space weapons in this scenario is an imperial project.\textsuperscript{iv}

Furthermore, these weapons would be most useful against small targets, such as groups and individuals. While the justification for the use of space-based weapons in the quoted scenario was to prevent genocide, the hypothetical attack constitutes their possessor as global \textit{police}, punishing without trial those specific actors it deems responsible for genocide. Even if the specific act provoking space-based attack is not a violation of international law, the political society with the capacity to intervene – and with it the capacity to decide when to intervene – constitutes itself as sovereign police of the international system.\textsuperscript{iv} Space-based weapons for force application, then, are most useful at targeting individuals and groups on short notice in order to achieve the \textit{policing} objective of “order” and control under a rule of law, even as that sovereign policing decision is made outside of the very law in whose name it is made.

We have already seen glimpses of this type of warfare in recent years. Consider, for example, that the Iraq War began with a so called “decapitation strike” aimed at assassinating Saddam Hussein in the hope of ending the war before it began. Similar tactics have been used by the Israeli Defense Forces to kill specific leaders of the Palestinians. Also, the U.S. has used Unmanned Aerial Vehicles equipped with missiles to target members of Al Qaeda and the Taliban in Afghanistan and Pakistan. Placing weapons in space aimed at terrestrial
targets would only accelerate the ability to carry out these types of “targeted killings” (assassinations).

Thus, application of force from orbital space would have at least three crucially important constitutive effects. First, it would constitute the U.S., as possessor of these weapons, as the center of a globally extensive, late-modern empire, a sovereign of the globe. But this sovereign would exercise its power in a new way. Rather than needing to have occupying forces in place to control the Earth’s lands and seas, it could rely heavily on space weapons to exercise social-political control. While these weapons are not particularly useful in fighting large-scale wars, or in the conquest of territory, there would no longer be a need to hold territory. All the global sovereign would have to do is to kill, or perhaps even threaten to kill, potential adversaries around the world in order to “police” social and political activities throughout its global empire.

Second, these weapons, just as space-based missile defense, would effectively strip other states of their territorial sovereignty. While de jure sovereignty may remain intact, de facto sovereignty would be effectively erased, in a manner reminiscent of classical empire. For decades, realist international relations scholars have promoted the idea that states secure their sovereignty through self-help. If states lack the capacity to defend themselves from adversaries, they are particularly vulnerable to attack and conquest. While liberal and constructivist scholars have questioned how closely sovereignty is linked to military capability, realists have responded that throughout history states with disproportionate military power have repeatedly violated the sovereignty of weaker states. While space-based weapons in and of themselves would not enable conquest of another state, they could be used very effectively to achieve precise political objectives on the territories nominally under the sovereign authority of other states.
Imagine what impact these weapons would have on U.S. foreign policy with respect to two of its currently most pressing objectives. Consider, for one, how useful such weapons might be with respect to preventing a rival state, such as Iran or North Korea, from acquiring nuclear weapons. While there has been speculation that the U.S. or Israel may launch air strikes against potential nuclear weapons manufacturing facilities in these countries, the logistics—getting access to airspace from neighboring countries, and the possibility of retaliation against military forces in the area—make such operations difficult. Using weapons in space would avoid these logistical difficulties, thereby making the missions easier (and presumably more likely). Threatening spaced-based attack on either manufacturing sites of weapons or on the political leadership of an adversary might be sufficient in many cases to alter the behaviour of targeted governments. In short, if the U.S. were to deploy such weapons in space, they would likely be used to similar effect as the gunboat diplomacy of the 19th century.

A second contemporary policy objective is to fight specific non-state actors. The 9/11 Commission Report discussed in great detail the logistical obstacles that prevented the Clinton administration from capturing or killing Osama Bin Laden, principally the difficulty in either launching cruise missiles into Afghanistan through another state’s airspace or deploying U.S. Special Forces in an area remote from U.S. military bases. Again, had the U.S. had space-based weapons at the time, they probably would have been the weapons of choice. When combined with intelligence about the location of a potential target, they could be used to kill that target on very short notice without logistical hurdles. The sovereignty of states would no longer be an obstacle to killing enemies. All that would stand in the way would be international norms against assassination and the potential political backlash of imperial subjects. While much has been made by constructivists in recent years of the
capacity of norms and taboos to restrain state behavior in a world of sovereign states, it does not necessarily follow that in a world of only one effectively global sovereign such taboos and norms would continue to function or even exist.

The example of using space weapons to target non-state actors such as Osama Bin Laden and Al Qaeda points to a third constitutive effect of space weapons capable of force application. Because these weapons could target anyone, anywhere, at anytime, everyone on Earth is effectively reduced to “bare life.” As Agamben demonstrates, sovereign power determines who is outside the laws and protections of the state in a relationship of “inclusive exclusion.” While human rights regimes and the rule of law may exist under a late-modern global empire policed by space weapons, the global sovereign will have the ability to decide the exception to this rule of law, and this state of exception in many cases may be exercised by the use of space weapons that constituted the sovereign in the first place.

**Constituting empire of the future**

Each of the three forms of space weapons has important constitutive effects on modern sovereignty, which, in turn, are productive of political subjectivities. Exclusive missile defense constitutes a “hard shell” of sovereignty for one state, while compromising the sovereign political subject status of other states. Space control reinforces that exclusive constitution of sovereignty and its potentiality for fostering unilateral decision. It also constitutes the ‘space-controlling’ state, the U.S., as sovereign for a particular global social order, a global capitalism. Space weapons capable of direct force application obliterate the meaning of territorial boundaries for defense and for distinguishing an inside from an outside with respect to the scope of policing and law enforcement—that is authorized locus for deciding the exception. States, other than the exceptional “American” state, are reduced to empty shells of *de jure* sovereignty, sustained, if at all, by convenient fiction—for example,
as useful administrative apparatuses for the governing of locals. And their “citizens” are produced as “bare life” subject to the willingness of the global sovereign to let them live. Together and in conjunction, these three sets of effects constitute what we believe can appropriately be identified as empire of the future, the political subjects of which are a global sovereign, an exceptional “nation” linked to that sovereign, a global social order normalized in terms of capitalist social relations, and “bare life” for individuals and groups globally to participate in that social order. If our argument is even half correct, the claim with which this paper began—that modes of political killing have important effects—would be an understatement!

IV. Coping with Empire of the Future

If the logic of space weapons projects as now being pursued by the United States is to constitute a new, historically unprecedented form of empire, there are significant theoretical and practical implications. By way of conclusion, we take up some of the most important of those implications briefly in this section.

Re-theorizing empire

Broadly speaking, recent theorizing on empire has posited two competing pictures. On one side, some scholars see in existence an effectively imperial global hegemony, in which the United States, through a combination of hard and soft power, dominates the international system in a manner of territorial control analogous to the British or Roman empires (often debating which of the two is the more appropriate analogy). On the other side, theorists such as Hardt and Negri have posited a de-centered system in which a network of loosely integrated institutions govern the various facets of the lives of all political subjects under a single, dispersed bio-political regime that they have labeled Empire. Each
of these images is conceptually and theoretically evocative; in our view both have much to recommend them despite their being opposing visions. This is because each captures a crucially important conceptual dimension—in the case of arguments about putative American empire, the centralization of sovereign power; and in the case of Hardt and Negri’s post-modern Empire, the de-territorialization of sovereignty. At the same time, however, each view is held to negate the other, seeing the two core principles as mutually contradictory. We argue instead that space weapons constitute a third version of empire that is neither the de-centered post-modern vision of Hardt and Negri, nor the territorially-defined hegemonic vision of advocates and opponents of American imperialism. If our analysis of constitutive logics is correct, theorists of empire must acknowledge that there is not a necessarily contradictory relation between de-territorialization and centralization of sovereign power—the two conjoin in empire of the future.\textsuperscript{lv}

In his later work Marshall McLuhan introduced “the tetrad” as a heuristic device for examining the impact the introduction of a new technology would have on a society.\textsuperscript{lvii} The tetrad was designed to arrest the tendency of theorists to describe the impact of technology in purely causal terms. McLuhan’s tetrad involves asking a set of four questions: What will the technology extend, enlarge or enhance? What will it erode or amputate? What will it reverse or flip into when pushed to its limits? What will the new technology retrieve that earlier technologies had rendered obsolescent? By addressing the four moments in McLuhan’s tetrad, we clarify how space weapons are constitutive of a new sovereignty, situated in the space-based empire of the future, which conjoins de-territorialization (of Hardt and Negri’s Empire) with the centralization of sovereign power (of classical imperial forms).

First, space weapons will extend the capacity of their possessor to project force globally and to defend its own territory. While the U.S., by virtue of its military pre-
eminence, already has this capacity to some extent, space weapons significantly deepen it—by compressing the time required to attack a target (from days and hours for airborne weapons to minutes and seconds for space-based weapons); by sharpening precision of targeting; and by further reducing the ability of others to deliver force against the U.S. Force application from orbital space is an extension of the modes of precision killing now associated with laser-guided smart bombs, unmanned aerial vehicles, and GPS-guided cruise missiles. These existing forms of U.S. air power rely heavily on space-based technology, such as GPS satellites, for their targeting, and thus represent the vanguard of the space age. Moving the weapons systems themselves into space will extend the range of their Earth-based counterparts and compress the time necessary to launch an attack. The current air power regime, on which the U.S. relies, requires a vast network of bases around the world to serve as staging and supply areas to support attacks. In extending the speed and range of modes of precision killing, empire of the future dispenses with the need for such a network of bases.

This brings us to the second moment of the tetrad: amputation. Previous empires – whether founded on land, sea or air power - have relied upon control of territory. In land-based empire, control is through territorial ‘occupation’. In sea-and air-based empires, the imperial power needn’t maintain absolute control over all the territories it governs, but it does require strategically located bases from which to project force. Space weapons will amputate need for reliance on such imperial control of territory. This decreased dependency on exerting imperial power through control of foreign territories is the most revolutionary aspect of empire of the future. For the first time in history, it will be possible to maintain empire through a combination of panoptic surveillance capacity – exercised largely through space-based observatory satellites – and the ability to project force precisely and
instantaneously anywhere on Earth, while denying these capacities to others and hardening the defensive shell of the empire’s center.

Amputation also consists in making many of the technologies and strategies of the nuclear age obsolescent. The most notable obsolescence would be the capacity of nuclear weapons to deter attack. A successful space-based missile defense would effectively strip nuclear powers of the capacity to deter the U.S. through the threat of a retaliatory strike. Empire of the future will, thus, be able to replace the nuclear era’s doctrine of MAD with discretionary pre-emptive and preventive strikes strategies.

While space-based empire would be de-territorialized on Earth, it would also flip the area of control from the Earth to Earth’s orbital space. The third moment of the tetrad, then, is the reversal of territoriality. Under current international law no state may claim sovereignty over any portion of outer space. The one territory that the empire of the future must own and control access to, however, is orbital space. So, the de-territorialization of Earth goes hand in hand with the territorial control of orbital space around Earth. Everett Dolman expresses this idea succinctly when he writes, “Who controls low-earth orbit controls near-Earth space. Who controls near-Earth space dominates Terra. Who dominates Terra determines the destiny of humankind.”

Space-based empire must control low-Earth orbit, and through the control of this “territory”, the control of all points on Earth – without the need to physically occupy them – becomes possible.

In the final moment of the tetrad — retrieval — empire of the future retrieves the centralized authority of the absolute state. As Carl Schmitt observes, modern political concepts are secularized versions of theological concepts, and sovereignty is merely the secularized version of God’s power brought down to Earth. A space-based empire would once again place sovereign power back in the heavens. The possessor of space weapons
would in effect be a human-made God, able to rain down punishment on disobedient subjects from the heavens. As such, while space-based empire will de-territorialize sovereignty on Earth, it will retrieve absolute, centralized sovereign power and place it (back) in the heavens.

**Imagining resistance**

Given these grim prospects for a de-territorialized global rule, are there any possibilities for resistance? Historically, every advance in the weaponry of imperial powers has been met with an advance in counter-hegemonic strategy. Most recently, insurgents in Afghanistan and Iraq have been able to counter the technological superiority of U.S. forces with very simple yet effective Improvised Explosive Devices. In these instances, those subjugated by the technologies and scientific knowledge linked to emerging weapons systems have re-appropriated these weapons systems to resist their imperial overlords. As such, it is reasonable to conclude that space weaponry could be countered through a variety of asymmetrical tactics such as: disabling space weapons while in orbit through kinetic energy, or even nuclear anti-satellite attacks; destroying the facilities where space weapons are produced or launched, or the research and development centers (such as universities) that are integral to the production of these systems; organizing strikes for the workers involved in harvesting the necessary raw materials; and refusing to pay taxes to the political apparatuses that control these systems. While it is difficult to imagine what precise forms resistance to space weapons might take, it is not unreasonable to conclude that even in a context of space-based empire, some form of political and military resistance will be possible, and will occur. Indeed, China’s recent launch of an Anti-Satellite system is an example of a state actor at the boundaries of imperial order engaging in such a re-appropriation of a weapons technology. One of the reasons Chinese military strategists have
given for developing Anti-Satellite technology is that this technology exposes an asymmetrical vulnerability in the U.S. military structure. The U.S. military is already dependent on satellite systems to co-ordinate its communications and weapons targeting systems. By developing a technology that can disable U.S. communications and targeting satellites, the Chinese military would hope to disrupt the operational abilities of conventional U.S. forces should an actual shooting war between the two powers take place. The development gives us some idea of how state and non-state actors at the margins of an empire of the future might resist space power by re-appropriating its technologies.

**Sovereignty as Strategy**

Yet, even as China’s ASAT test points to one possible way of resisting empire of the future it also points to one way in which this empire is currently being constituted. Within U.S. strategic planning circles China’s ASAT test has been used as an impetus to increase funding to American space weapons research and development initiatives. This reaction by the U.S. defense policy establishment is indicative of the strategic logic at work in empire of the future. This strategic logic accelerates processes of de-territorialization by pursuing the development of technologies that make the control of territory irrelevant, yet the logic simultaneously pursues the re-territorialization the U.S. and orbital space as areas that should be off-limits to non-American actors. The strategy of empire of the future undermines the binary logic of a state-system predicated either on a territorially bounded sovereign states or a globally diffused, de-centralized and de-territorialized biopolitical Empire as proposed by Hardt and Negri. Our analysis reveals a third possibility: in the empire of the future space power combines a set of otherwise heterogeneous processes. Space based missile-defense strips all states – except the possessor of the system – of their hard shells by eroding nuclear deterrence capabilities, while providing the possessor of missile defense with a territory more
secure from nuclear attack. Space control denies all states with the exception of the controlling power unfettered access to space. Furthermore it annexes orbital space as a territory of the space power. Finally, force application from orbital space makes any point on earth a potential target for the military force of empire of the future. This makes the traditional imperial imperative to project force through controlling territory no longer necessary. Empire of the future combines strategies of de-territorialization and re-territorialization to simultaneously undermine some features of state sovereignty and reinforce others. Therefore current assumption that many IR theorists make that international society must be based on either a collection of sovereign territorial states or deterritorialized biopolitical apparatuses ignores the possibility that these two processes can be co-constitutive. In empire of the future the locus of authority is centralized but this authority governs a deterritorialized political entity. While this new constellation of political power will present new possibilities for resistance, we should not underestimate how this empire’s new modes of killing will constitute structures of domination more terrifying than anything humanity has yet to encounter.
V. Notes and References


iii The most recent Pentagon budget request to Congress publicly earmarks more than half a billion dollars for experimental space-weapons testing programs, and, according to a March 14, 2006 report in the Boston Globe, “specialists believe the classified portion of the…budget, blacked out for national security reasons, almost certainly includes other space-related programs.” The New York Times Magazine (Sunday, December 10, 2006, p.70) reports that “one study of nonclassified budgets released earlier this year indicated that spending on
space-weapons research has grown by more than a billion dollars each year since 2000, with an eye toward establishing uncontestable ‘space superiority.’”


For a technological determinist argument about space weapons see David Baker, *The Shape of Wars to Come* (Cambridge, MA: Patrick Stephens, 1981). He argues that an inevitable consequence of the development of technologies for space exploration is weapons in space. For a critique of such technological determinism see Sanford Lakoff and Herbert F. York, *A Shield in Space? Technology, Politics, and the Strategic Defense Initiative* (Berkeley, CA: University of California Press, 1989). They argue that Strategic Defense Initiative (SDI) is a classic example of misplaced faith in technological salvation. Behind President Reagan’s SDI is “the fallacy of the last move.” In a technological arms race it is dubious to believe that there is a final move to end it.

We follow E. H. Carr in referring to the generic form, political societies, rather than the conventional practice in most scholarship today, which is to refer to states. For us, as for Carr, the state is a particular—and in the modern era particularly important—form of the more general phenomenon of political society. Other forms include empire. We endorse Carr’s classical realist understanding that the human species is fundamentally social and that sociality is irreducibly political in the sense that it always entails power and conflict. As such, modes of political killing are at the core of the constitution of political society. Edward Hallett Carr, *The Twenty Years’ Crisis, 1919-1939: An Introduction to the Study of International


In Wendt’s terms, “…the struggle of individuals and groups for recognition of their subjectivity…is channeled toward a world state by the logic of anarchy, which generates a tendency for military technology and war to become increasingly destructive.” Alexander Wendt, “Why a World State is Inevitable,” European Journal of International Relations, 9(4) (2003), pp. 491-542, at p. 491.


Herz, “Rise and Demise,” p. 473. In Morgenthau’s words “Any attempt, however ingenious and forward-looking, at assimilating nuclear power to the purposes and instrumentalities of the nation-state is negated by the enormity of nuclear destructiveness. We have been trying to normalize, conventionalize, and ‘nationalize’ nuclear power. By doing so, we have tackled the wrong horn of the nuclear dilemma.” Morgenthau, “Four Paradoxes,” p. 35.


All three are exemplary works in providing persuasive constitutive analysis of structurally logical future likelihoods, in our view. However, we do not agree with Wendt that the structural logic he has identified is as powerfully re-productive, and hence has such *inevitable* constitutive implications, as he maintains. Wendt, “World State”.


As of the year 2000 there were more than 500 satellites in orbit, worth in excess of $250 billion with ownership in 46 countries. Benjamin S. Lambeth, *Mastering the Ultimate High Ground: Next Steps in the Military Uses of Space* (Santa Monica, CA: RAND, 2003), p.99.

Those excluded from orbital space are simultaneously included in the very constitution of U.S. sovereignty. This suggests an intriguing relationship of space control to Agamben’s critique of modern sovereignty in terms of the logic of “inclusive exclusion”. Giorgio Agamben, *Homo Sacer: Sovereign Power and Bare Life* (trans. Daniel Heller-Roazen) (Stanford, CA: Stanford University Press, 1998). We are unable to explore that connection in depth in this article, but see (author citations).


SpaceSecurity.org, “2005 Briefing notes”.

Under the current regime, the ITU assigns orbital slots to states, but with limited ability of enforcement. Indonesia placed a satellite in an orbital slot assigned to Tonga and refused to remove the satellite, even after the ITU demanded that it do so. Spacesecurity.org, Space Security 2004 (Waterloo, ON: Northview Press, Ltd., 2004).


We take this distinction between the technical and tactical aspects of force-application space weapons from Preston, et al. Space Weapons.

The reason it would take longer for kinetic weapons to be deployed than energy weapons is that kinetic-weapons use the Earth’s gravity to develop their destructive capability. As such, they would need to be deployed in higher orbits than energy weapons and would require a few hours to properly acquire their targets and then “fall” towards them. For a detailed analysis of the technical requirement of such a system see Preston, et al., Space Weapons, pp. 40 - 45.


In employing the term, “imperial project”, we follow Hardt and Negri in arguing that “Empire is formed not on the basis of force itself but on the basis of the capacity to present force as being in the service of right and peace.” Michael Hardt and Antonio Negri, *Empire* (Cambridge, MA: Harvard University Press, 2000), 15. Under this conception, even humanitarian missions are imperial as they constitute as sovereign those who decide when and where “humanitarian” interventions take place.


We use the term late-modern explicitly to distinguish this from the post-modern Empire discussed by Hardt and Negri, *Empire*. Late-modern empire, although globally extensive, has a sovereign center.

This development extends the manifest (but, to our knowledge, never officially explicated) desire for a war-fighting capacity in the absence of troops. Dependence on live soldiers in battle risks a loss of domestic political will, a revolt of armed forces, and/or an exposure of less-than-superpower might. Just as the logic of capital accumulation involves the substitution of dead labor (machines) for living labor, the logic of late-modern warfare pushes for the substitution of disembodied technologies of killing for troops on the ground.


lxi Agamben, *Homo Sacer*.

lxii Agamben, *Homo Sacer*. In fact, following Hardt and Negri, *Empire*, these legal instruments may even be an essential component of Empire. Whether they are similarly defining of late-modern empire (empire of the future) is uncertain.


lxiv Hardt and Negri, *Empire*.

lxv Julian Reid has made a similar point with respect to the war on terror. Reid rejects Michael Cox’s analysis of the war on terror as a re-assertion of state sovereignty at the expense of the bio-political processes that Hardt and Negri equate with globalization. Instead, Reid argues that biopolitical processes of deterritorialization play an integral role in the sovereign strategies of power that constitute the war on terror. See Julian Reid, “The Biopolitics of the War on Terror: a critique of the ‘return of imperialism’ thesis in international relations,” *Third World Quarterly* 26 (2) (2005), pp. 237 – 252. Julian Reid, *The biopolitics of the war on terror*.
life struggles, liberal modernity, and the defence of logistical societies (Manchester, UK: Manchester University Press, 2006).


Dolman, Astropolitik, p. 8.

Schmitt, Political Theology.

We want to reiterate that, in our view, these grim prospects are not inevitable, even if space weapons are deployed by the U.S. They are, however, structural potentialities—logical tendencies—that demand attention.

Tellis, “Punching the U.S. Military’s,” p. 6.

We are explicitly drawing on Deleuze and Guattari’s concepts of deterritorialization and reterritorialization. In their writings deterritorialization refers to “the movement by which ‘one’ leaves the territory.” Reterritorialization is the process that accompanies deterritorialization whereby the sovereign state apparatus recombines the deterritorialized elements to constitute a new assemblage. Gilles Deleuze and Felix Guattari, A Thousand Plateaus trans. by Brian Massumi (Minneapolis: University of Minnesota Press, 1987), pp. 508 – 510. For an exposition of these concepts see Paul Patton, Deleuze and the Political (London, UK: Routledge, 2000). For a discussion of how these concepts can be usefully deployed in International Relations theory, see Julian Ried, “Deleuze’s War Machine: Nomadism Against the State,” Millennium: Journal of International Studies, 32 (1), pp. 57-85.