Re-imagining global nuclear ordering beyond proliferation and deterrence

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Abstract

This article analyzes nuclear weapons related scholarship as a subset of security studies particularly prone to self-censorship, even in the post-Cold War era. It argues that self-censorship effects come from the joint use of the notions of deterrence and non-proliferation and the invocation of an expected veto player. The effects of the words 'proliferation' and 'deterrence' and the assumption that a supposedly important player in nuclear policy will veto proposals for change, create avenues for self-censorship and delegitimize transformative thinking. This is because the utterances including 'proliferation' and 'deterrence' do double work: they want, simultaneously, to describe the world as it is and to have an impact on it. This tension shapes a space in which transformative thinking appears to be either incompetent or dangerous. Furthermore, the invoked existence of an important player inexorably reluctant to change makes critical thinking look futile: it prevents some actors inclined to accept change in principle from actually modifying their practice. To show how these delegitimizing mechanisms and the self-censorship effect operate, the article analyzes the op-ed piece of Harold Brown and John Deutsch rejecting the policy shift towards nuclear disarmament, on the one hand, and more briefly those of George Shultz, William Perry, Henry Kissinger and Sam Nunn advocating it, on the other. Finally, it provides a strategy to create space for transformative thinking about nuclear weapons in security studies.

Keywords: transformative innovation; nuclear proliferation; nuclear deterrence; nuclear disarmament; nuclear winter; technostrategic discourse; rhetorical coercion; Albert O. Hirschman; expected veto player.

Introduction

Nuclear discourse is most often a repetition of well-established utterances by authoritative figures, relabeling of the same ideas as 'rethinking' and rehashing efforts to convince those who are already convinced. In other words, it is highly ritualized and quite averse to transformative conceptual innovation or fruitful debate.[2] Innovation is understood here as going beyond technical innovations in warhead designs or force structures in nuclear-weapon states. The initiative on the Humanitarian Impact of Nuclear Weapons, which started in 2013 and connects the effects of nuclear explosions with International Humanitarian Law qualifies as one of the few transformative innovations that gained traction since the end of the Cold War, with 158 states attending the latest conference hosted in Vienna in December 2014 and 117 of them endorsing the "Austrian pledge" to work towards stigmatization, prohibition and elimination of nuclear weapons, later renamed the "humanitarian pledge".[3] This scarcity of transformative conceptual innovation is all the more surprising when one considers the frequency of utterances about radical, revolutionary and irreversible change in the nuclear age. J. Robert Oppenheimer's famous statement that "we knew the world would not be the same" to describe his feelings right after the Trinity test is only the first of a long series of such claims, which seem to call for such conceptual innovation after the invention of thermonuclear weapons, ICBMs, the end of the Cold War and 9/11.[4]

This surprising lack of innovation has for long coexisted with an absence of fruitful debate. Sir Michael Quinlan observed that his division between "righteous abolitionists" and "dismissive realists" "scarcely deserved to be called a debate"[5]. This becomes clear when one

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[2] This builds on the classical definition of a ritual in anthropology as a "culturally standardized, repetitive activity, primarily symbolic in character, aimed at influencing human affairs". Quoted in David I. Kertzer, *Ritual, Politics, and Power* (New Haven: Yale University Press, 1988), p. 8. For a classical statement of the problem, see Carol Cohn, "Sex, death and the rational world of defense intellectuals", *Signs: Journal of Women in Culture and Society* 12, no. 4 (1987).

[3] A summary of the conference can be found on the website of the Austrian Foreign Ministry. http://www.bmeia.gv.at/en/european-foreign-policy/disarmament/weapons-of-mass-destruction/nuclear-weapons-and-nuclear-terrorism/vienna-conference-on-the-humanitarian-impact-of-nuclear-weapons/. See Tom Sauer and Joelien Pretorius, "Nuclear Weapons and the Humanitarian Approach", *Global Change, Peace and Security* 26, no. 3 (2014) for a qualification of the conceptual innovation contained in the initiative. Of course, notions like "non-offensive defence", developed within Peace Research, and E. P. Thompson's concept of "exterminism" were transformative conceptual innovations that allowed to re-imagine global nuclear ordering beyond deterrence and proliferation, but they were developed during the Cold War and remained marginal. Per Berg and Sverre Lodgaard, "Disengagement Zones. A Step towards Meaningful Defence", *Journal of Peace Research* 20, no. 1 (1983). Edward P. Thompson, "Notes on Exterminism, the Last Stage of Civilization" *in Exterminism and Cold War* New Left Review editions, 1982

[4] Quoted in Richard Rhodes, *The Making of the Atomic Bomb* (New York: Simon&Schuster, 1986), p. 676.

[5] Michael Quinlan, "Abolishing Nuclear Armories. Policy or Pipedream?", *Survival* 49, no. 4 (2007-2008), p. 8.

considers the contemporary validity of Ken Booth and Nicholas Wheeler's diagnosis from 1992: "the issue of denuclearization in the West has been tied up with loyalty tests of one sort or another. As a result, the scope for rational discussion has been considerably circumscribed. […]The same was true, in reverse, in the Soviet Union. Instead of open-minded discussion about nuclear weapons, there were loyalty tests and dialogues of the deaf."[6]

This article tackles those two aspects together: how has acceptable conceptual innovation with regards to nuclear weapons been framed and how can we re-imagine practices of nuclear ordering so as to reinvigorate the debate about nuclear weapons?

Non-rhetorical reasons for this situation of bounded innovation are already well documented: the interests at stake are tremendous; experts and policymakers chronically suffer from a confirmation bias. However, those explanations do not account for the innovation that has taken place and its effects. So, studying the rhetorical strategies setting the boundaries of acceptable innovation in nuclear discourse is at the same time a way to reclaim the debatable, ethical and political nature of nuclear choices by problematizing their justification, a contribution to the scholarship on rhetoric[7] in security studies and an addition to the studies of the nuclear language, or "nukespeak".[8]

To be more specific, I will elaborate on the approach of rhetorical coercion[9]. It usefully recognizes that persuasion is rare and that reintroducing power in the studies of

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[6] Ken Booth and Nicholas Wheeler, "Beyond Nuclearism" in Regina Cowen Karp, ed., *Security without Nuclear Weapons* (New York: Oxford University Press, 1992), pp. 26-27.

[7] Key works associated with the rhetorical turn in international relations are Friedrich Kratochwil, *Rules, Norms and Decisions: On the Conditions of Legal Reasoning in International Relations and Domestic Affairs* (Cambridge: Cambridge University Press, 1989); Neta Crawford, *Argument and Change in World Politics: Ethics, Decolonization, Humanitarian Intervention* (Cambridge: Cambridge University Press, 2002); Stacie Goddard, "Uncommon Grounds: Indivisible Territories and the Politics of Legitimacy", *International Organization* 60, no. 4 (2006); Thomas Risse, "'Let's Argue!' Communicative Action in World Politics", *International Organization* 54, no. 1 (2000); Jennifer Mitzen, "Reading Habermas in Anarchy: Multilateral Diplomacy and Global Public Spheres", *American Political Science Review* 99, no. 3 (2005).

[8] Paul Chilton, (ed.), *Language and the Nuclear Arms Debate: Nukespeak Today*, Pinter, London, 1985; Cohn, "Sex and Death in the Rational World of Defense Intellectuals"; Stephen Hilgartner, Richard C. Bell and Rory O'Connor, *Nukespeak. Nuclear Language, Vision, and Mindset* (San Francisco: Sierra Club, 1982); Glenn Hook, "The Nuclearization of Language. Nuclear Allergy as Political Metaphor", *Journal of Peace Research* 21, no. 3 (1984); Glenn D. Hook, "Making Nuclear Weapons Easier to Live with: The Political Role of Language in Nuclearization", *Bulletin of Peace Proposals* 16, no. 1 (1985); David Mutimer, *The Weapons State. Proliferation and the Framing of Security* (Boulder, Co: Lynne Rienner, 2000); Benoît Pelopidas, "The Oracles of Proliferation, How Experts Maintained a Biased Historical Reading that Limits Policy Innovation", *Nonproliferation Review* 18, no. 1 (2011).

[9] Ronald Krebs and Patrick Jackson, "Twisting Tongues and Twisting Arms: The Power of Political Rhetoric", *European Journal of International Relations* 13, no. 1 (2007); Ronald Krebs and Jenifer Lobasz, "Fixing the Meaning of 9/11: Hegemony, Coercion, and the Road to War in Iraq", *Security Studies* 16, no. 3 2007; William

rhetoric is needed. It assumes the structured nature of any given discursive arena and intends to explain how the opponents to a claim will be deprived of "access to the rhetorical materials needed to craft a socially sustainable rebuttal."[10] In their brief discussion of the limits of possible rhetorical innovation[11], Krebs and Jackson insist on the cost in terms of "material resources, time and effort" on the part of the claimant to bring to bear a new rhetorical resource as well as the density of the communication network as an obstacle to innovation.

I argue that this discussion would benefit from an engagement with the works of Albert Hirschman on the rhetoric of reaction, which might more adequately be characterized as the rhetoric of conservatism.[12] This work, which has been ignored so far by IR scholars, offers a fruitful contribution to the understanding of the mechanisms of rhetorical coercion.[13] Hirschman identified three rhetorical strategies that American conservatives have commonly used to discredit progressive policies: the perversity thesis, the futility thesis and the jeopardy thesis. The perversity thesis contends that: "the attempt to push society in a certain direction will result in its moving all right, but in the opposite direction"[14]; the futility thesis holds that "attempts at social transformation will be unavailing, that they will simply fail to 'make a dent'"[15]; finally, "the *jeopardy thesis* argues that the cost of the proposed change or reform is too high as it endangers some previous, precious accomplishment."[16] In the second section of the article, I will show how a combination of these three rhetorics helps to explain why transformative voices in the nuclear discourse have been delegitimized.

I argue that an underexplored part of the limits of acceptable conceptual innovation comes from the status of two key terms, proliferation and deterrence, that have been the pillars of the conversation for five decades and from the usual expectation that there is someone or a group capable of blocking change who will do so.[17] I further contend that those

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Flanik, "Bringing FPA Back Home: Cognition, Constructivism, and Conceptual Metaphor", *Foreign Policy Analysis* 7, no. 4 (2011).

[10] Krebs and Jackson, "Twisting Tongues and Twisting Arms*"*, pp. 36, 45.

[11] Ibid., pp. 45-46.

[12] Albert O. Hirschman, *The Rhetoric of Reaction. Perversity, Futility, Jeopardy* (Cambridge: Harvard University Press, 1991).

[13] M. V. Ramana engages with Hirschman's work in the context of nuclear policy his piece on "Nuclear Policy Responses to Fukushima: Exit, Voice and Loyalty", *Bulletin of Atomic Scientists* 66, no. 2 (2013) but not with *The Rhetoric of Reaction*.

[14] Hirschman, *The Rhetoric of Reaction*, p. 11.

[15] Ibid., p. 7.

[16] Ibid., p. 7, emphasis in original.

[17] The notion of proliferation has been widely used since the late 1950s-early 1960s. On its origins, see Matthew Woods, "Inventing Proliferation. The Creation and Preservation of the Inevitable Spread of Nuclear Weapons", *Review of International Affairs* 3, no. 3 (2004). As for deterrence, the concept obviously existed long before the

two elements taken together are rhetorically coercive and delegitimize conceptual innovation outside of the remit of proliferation and deterrence as incompetent, dangerous or futile.

Proliferation and deterrence are problematic notions that are too often accepted as neutral analytical categories. When conceptual innovation takes place in the nuclear conversation, it is most often within the boundaries set by these two categories. For example, innovations are often about an adjective or a prefix: the most recent innovations would be *tailored* deterrence or *cross-domain* deterrence; similarly, the 1990s imagined *opaque* proliferation, then *counter*-proliferation. One might argue that the notion of proliferation actually is in debate. However, the debate focuses only on its consequences instead of questioning the diagnosis and the concept itself; it is also very much limited to the academic community.[18] As a matter of fact, analysts argue about the strategic value of the spread of nuclear weapons characterized as proliferation but policymakers have publicly stated that the overall consequences were dangerous for a long time and show no interest in the debate.[19] Among the academics, those who want to go beyond the debate between pessimists and optimists about the effects of the spread of nuclear weapons share basic premises about what proliferation is and would agree that what is happening in the world can be defined as "proliferation".[20] So, the deterministic undertones of the proliferation metaphor, its mechanical and biological understanding of nuclear choices remain in the background of the

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invention of nuclear weapons and the posterity of the edited book by Bernard Brodie *The Absolute Weapon. Atomic Power and World Order* (New York: Harcourt, Brace & co, 1946) created the inaccurate impression that a relationship of mutual deterrence between the United States and the Soviet Union had been established since the invention of nuclear weapons. However, this relationship was mostly created in the 1950s and 1960s. I therefore consider that both terms have been central to the nuclear conversation for approximately half a century. See Patrick Morgan and George Quester, "How History and the Geopolitical Context Shape Deterrence" in George P. Shultz, Sidney D. Drell and James E. Goodby, eds., *Deterrence. Its Past and Future* (Stanford: Hoover Institution Press, 2011).

[18] See the classical debate between Scott D. Sagan and Kenneth N. Waltz: *The Spread of Nuclear Weapons. An Enduring Debate* (New York: WW Norton, 2012).

[19] Thirteen years ago, Jeffrey Knopf already noted that the media and the political world were on the pessimists' side. "Recasting the Proliferation Optimism-Pessimism Debate", *Security Studies* 12, no. 1 (2002). One might add that this is true of what policymakers say publicly but they can be more flexible depending on the context and the strategic interests of their nations or the group they stand for. Peter Lavoy already suggested this in his famous "The Strategic Consequences of Nuclear Proliferation: A Review Essay", *Security Studies* 4, no. 4 (1995), pp. 695-753. The reviews of the most recent edition of the classical Waltz/Sagan debate remain puzzled however by the disconnect between the academic and the policy debate on proliferation. See Francis J. Gavin, "Policy, History and the Ivory Tower-Policy Gap in the Nuclear Proliferation Debate", *Journal of Strategic Studies* 35, no. 4 (2012), pp. 573-574.

[20] Matthew Kroenig, "Beyond Optimism and Pessimism: The Differential Effects of Proliferation", Working Paper, November 2009.

conversation.[21] As for deterrence, the concept does not have any credible rival in the nuclear conversation. It has been under attack[22] but remains an unavoidable category.[23]

Thence, the first section of this paper examines the double work of utterances based on proliferation and deterrence and the problem of the expected veto player. It argues that these utterances have to sound purely descriptive to increase their effect. It also shows that nuclear decision-makers who had moved away from the orthodoxy but did not act upon their beliefs invoked an expected veto player to justify their attitude.

The second section articulates three rhetorics that follow from the problems analyzed in the previous section and delegitimize transformative thinking about nuclear weapons. It also shows how the nuclear discourse places the burden of proof on the transformative side. It analyzes the rhetoric of Harold Brown and John Deutsch in their famous op.-ed. entitled "The nuclear disarmament fantasy" in opposition to that of the "four horsemen" George Shultz, William Perry, Sam Nunn and Henry Kissinger, who make a somewhat innovative case for nuclear disarmament. The analysis of those two antagonistic discourses shows how the framing of the nuclear discussion in terms of proliferation and deterrence limits the space for innovation due to the risk of delegitimation.

The third section suggests a way out of the deadlock, towards a re-imagination of global nuclear ordering. It argues for calling into question the assumptions and intended effects of the utterances based on proliferation and deterrence.

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[21] For a critique of the biased historical reading and political effects associated with the metaphor of proliferation, see Pelopidas, "The Oracles of Proliferation". Some exceptions to this critique would be William Walker, "The UK, threshold status and responsible nuclear sovereignty", *International Affairs* 86, no. 2 (2010), pp. 447-464, the pioneering works by David Mutimer on the framing of proliferation and Campbell Craig and Jan Ruzicka, "The Nonproliferation Complex", *Ethics & International Affairs* 27, no. 3 (2013).

[22] Among a very large literature, one should mention the following pieces, which are representative of a variety of time periods, nationalities, disciplines, methodologies and professional backgrounds: Michael MccGwire, "Deterrence: the problem not the solution", *International Affairs* 62, no. 1, (Winter 1986); John Mueller, "The Essential Irrelevance of Nuclear Weapons. Stability in the Postwar World", *International Security* 13, no. 2 (1988); John Vasquez, "The Deterrence Myth: Nuclear Weapons and the Prevention of Nuclear War" in Charles Kegley, ed., *The Long Postwar Peace* (New York: HarperCollins, 1991); Ward Wilson, "The Myth of Nuclear Deterrence", *Nonproliferation Review* 15, no. 3 (2008); John Scales Avery, "Flaws in the Concept of Nuclear Deterrence", *CADMUS* 1, no. 4, (2012); Benoit Pelopidas, "A bet portrayed as a certainty" in George P. Shultz and James E. Goodby (eds.), *The War that Must Never be Fought. Dilemmas of Nuclear Deterrence* (Stanford: Hoover Press, 2015; Mark Bell and Nicholas L. Miller, "Questioning the Effects of Nuclear Weapons on Conflict", *Journal of Conflict Resolution* 59, no. 1 (2015).

[23] Jeffrey Knopf already noted the multiple meanings of deterrence that can be perceived as a concept, a research program, a tool of statecraft or a subject of policy debate. See Jeffrey W. Knopf, "Three Items in One: Deterrence as a Concept, a Research Program and a Political Issue" in T. V. Paul, Patrick Morgan and James J. Wirtz, eds., *Complex Deterrence. Strategy in the Global Age* (Chicago: University of Chicago Press, 2009).

The concluding section summarizes the findings of the article and outlines a strategy for opening a space for transformative thinking about nuclear weapons based on epistemological modesty, critical historical work and a focus on nuclear vulnerability, which reproblematizes both deterrence and proliferation. This would restore the ethical and political dimensions of the nuclear conversation understood as a set of bets on the future which expertise or truth alone cannot decide.

The duality of proliferation and deterrence and the problem of the expected veto player

Utterances based on proliferation and deterrence suffer from two main problems:

First, both proliferation and deterrence appear as purely descriptive categories but they intend to be part of a self-denying or self-fulfilling prophecy. They describe the world and at the same time, they already act on it, with a very specific expected effect. In a context in which the spread of nuclear weapons is almost unanimously considered as an undesirable outcome[24], announcing proliferation is calling for urgent non/counter-proliferation action. It is already a practice intended to prevent proliferation from happening. In other words, it intends to be a self-denying prophecy: naming the horizon of proliferation is expected to urge action to prevent it from materializing. As such, the prophecy of proliferation intends to be self-denying. Similarly, talking authoritatively in public about the efficacy of deterrence intends to give credibility to the deterrent threat and therefore to strengthen its effect. Saying that deterrence works is intended to make it work or at least to help it work better. It is meant to be a self-fulfilling prophecy.[25] As a consequence, for these utterances to be able to work better, their authors have to deny their intention to produce an effect. They have to appear authoritative as descriptions and nothing more in order to have the intended effect. For example, the democratic peace hypothesis is intended to have an impact. However, as Thomas Risse explains, the effect requires a belief in the validity of the descriptive hypothesis in the first place: "*if actors of democratic states view each other as predisposed toward*

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[24] Kenneth Waltz remains an exception and has claimed for more than three decades that slow and well-managed spread of nuclear weapons could lead to a more stable world. The classical statements of his minority view are Kenneth N. Waltz, *The Spread of Nuclear Weapons: More May Better*, *Adelphi Paper* 171 (London: International Institute for Strategic Studies, 1981).

[25] Amir Lupovici, "The Emerging Fourth Wave of Deterrence Theory – Toward a New Research Agenda", *International Studies Quarterly* 54, no. 3 (2010), p. 716.

peacefulness, the significance of the security dilemma in their interactions is substantially reduced. [...] In other words, the presumption that the other *is* predisposed toward peacefulness leads to a self-fulfilling prophecy if both sides act on this assumption."[26] The utterance must appear as an accurate description and nothing more to become more than that and have an effect. If your judgment about proliferation or deterrence betrays a desire to prevent the former or strengthen the latter, it will have much less impact. If it intends to do so but manages to hide it, its impact will probably be stronger. Thus, the quest for effectiveness provides incentives for mischaracterizing the status of what you are saying. It will increase the incentives to remove caveats, deny the unknowable, and solidify hypotheses into certainties in the name of the intended effect. If you believe your analytical conclusion will contribute to nuclear policy through deterrence or non-proliferation, then you have good reasons to radicalize your judgments and make them look strictly descriptive, analytical and scientific.[27]

Second, the nuclear discussion is plagued by the invocation of an expected veto player that will be inflexible. This invocation assumes that one actor or group who believes in the nuclear orthodoxy has to be taken into account because this actor will veto the proposed transformation. As a consequence, convincing people of the fallacies of part of the nuclear conversation might not be enough to change their practices. As long as they anticipate that powerful others believe in the orthodoxy and act upon this anticipation, their sincere belief does not actually affect what they do.[28] For example, between 1961 and 1964, there was a constant disconnect between what Secretary of Defense McNamara claimed to be the nuclear force requirements for the United States national security and the actual levels that he requested, which can be explained by what he regarded as the expected veto player. As early as February 1961, he claimed that the missile gap was "an illusion"[29] and, even after a 3 year increase in Soviet nuclear weapons capabilities argued in a Draft Presidential Memorandum to President Johnson from December 3, 1964, that 400 1Mt weapons were enough to achieve

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[26] Thomas Risse-Kappen, "Democratic Peace — Warlike Democracies? A Social Constructivist Interpretation of the Liberal Argument" *European Journal of International Relations* 1, no. 4 (1995), pp. 504-505. Emphasis added.

[27] The common practice of referring to the UK's nuclear weapons as "the deterrent" is a typical example of this masquerading, as if the presence of nuclear weapons was enough to actually deter everything one wants to deter and did not have any other effect. Jeremy Stocker, *The United Kingdom and nuclear deterrence*, Adelphi Paper 386 (London: Routledge/International Institute for Strategic Studies, 2007), p. 43.

[28] See Slavoj Zizek, *The Sublime Object of Ideology* (London: Verso, 1989), p. 186.

[29] Desmond Ball, *Politics and Force Levels. The Strategic Missile Program of the Kennedy Administration.* (Berkeley: University of California Press, 1980), p. 93

"assured destruction".[30] However, on 28 March 1961 however, he announced the construction of 600 ground-to-ground Minuteman missiles and 24 submarines carrying Polaris missiles. In spite of the Deputy Secretary of defense Roswell Gilpatric stating publicly, on 10 October 1961, that the supposed missile gap which was driving the shape and size of the nuclear force did not exist and that the U.S. were ahead in terms of nuclear weapons capabilities, in December, McNamara argued before Congress in favor of even more weapons than he had before: 1000 minuteman missiles and 41 submarines. Later on, he would explain that he thought he would not be credible in front of Congress had he asked for fewer.[31]

In this example, the US Congress was the expected veto player. It is not enough to be convinced that the orthodoxy is worth challenging. If the anticipation of powerful others' beliefs leads you to keep acting the same way, then transformative thinking becomes futile. And if you are not even convinced but feel it expedient to say that you are, whatever the reason is, you can still say it and use the supposed belief of a decisive third party not to change your practice.

These are major reasons why transformative conceptual innovation is having such a hard time finding a space to exist in the nuclear conversation: each of them exposes innovative voices to a form of delegitimation that frames acceptable innovation.

Incompetent, Dangerous or Futile: How Transformative Innovation is Delegitimized

The op-ed. published in the *Wall Street Journal* by former US Secretary of Defense Harold Brown and former CIA director John Deutsch entitled "The Nuclear Disarmament Fantasy" is an explicit reply to "several former senior foreign policy officials who wrote [in

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[30] Draft Presidential Memorandum from Robert McNamara to President Johnson, 3 December 1964, p. 11, available at http://nsarchive.gwu.edu/nukevault/ebb275/20.pdf. For the three year increase in Soviet nuclear weapons capabilities, see the data compiled by the Natural Resources Defense Council, available at http://www.nrdc.org/nuclear/nudb/datab10.asp

[31] Georges Le Guelte, *Les armes nucléaires. Mythes et réalités* [*Nuclear Weapons. Myths and Realities*] (Arles: Actes Sud, 2009), pp. 104-105 and Stephen Schwartz, ed., *Atomic Audit* (Washington D. C.: Brookings Institution Press, 1998), pp. 186, 189-190 fn 203. One has to note, here, that in the early 1960s, in case of opposition between McNamara's suggestions backed by systems analysis and procurement options proposed by the military, Congress often found McNamara's perspective more convincing. The questioning of systems analysis by Congress did not start before the mid 1960s. Cf. Sharon Weiner, "Defence Politics: from McNamara to Goldwater-Nichols", unpublished manuscript.

the same newspaper]"[32] and tried to redefine the terms of the nuclear conversation. As such, it is a very telling example of how the two problems identified in the previous section (ie 1- the double work of utterances involving proliferation and deterrence and the need to hide the expected effect of these utterances so as to possibly create it and 2- the problem of the expected veto player) open three paths for delegitimizing new ideas by making these ideas appear either incompetent, dangerous or futile. Such rhetorics only come into play when proponents of the orthodoxy feel they cannot simply ignore new ideas.[33] This section will therefore focus on the argument between Shultz, Perry, Kissinger and Nunn on the one hand, Brown and Deutsch on the other, precisely because it offers an example in which the voices offering new ideas cannot simply be ignored.[34]

The descriptive ambitions of utterances using proliferation and deterrence open the way for the delegitimation of proponents of transformative innovation on the ground of *incompetence*. Since these utterances are intended to be perceived as the truth about the state of the nuclear world, contrary statements could only come from incompetence, of which ignorance is one form. In a field in which institutional recognition and specialized knowledge confer a specific entitlement to deference, this can be particularly damaging. Proponents of transformative conceptual innovations that would challenge the relevance and effectiveness of non-proliferation or deterrence policies are immediately exposed to these attacks.

"I know things that you don't" is a common conversation stopper that invokes the technicality and the high level of secrecy in the field to delegitimize the other side as ignorant. The point here is not to deny the possibility of a difference in levels of knowledge between two participants in a conversation, but rather to show that the claim that "I know things that you don't" operates as a conversation an irrefutable conversation stopper beyond and independently of a possible difference in knowledge. An exclusive access to a truth portrayed as reality renders opposite statements as based on incompetence and lack of information. The indirect argument about the strategic defense initiative (SDI) between world-renowned physicists Edward Teller and Andreï Sakharov, on 16 November 1988, at the Ethics and

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[32] John Deutsch and Harold Brown, "The Nuclear Disarmament Fantasy", *Wall Street Journal*, November 19, 2007, p. A19.
[33] Ignoring transformative ideas is obviously the most frequent and easiest strategy. Interview of the author with former RAND analyst, nuclear war planner and then anti-nuclear activist Daniel Ellsberg, Kensington, CA, 28 August 2015.
[34] Martin Senn and Christoph Elhardt show why those voices cannot be ignored in "Bourdieu and the Bomb. Power, Language and the Doxic Battle over Nuclear Weapons", *European Journal of International Relations*, 20(2), 2014.

Public Policy Center in Washington DC., is an example of the "I know things that you don't" rhetorical posture. During that evening banquet devoted to a celebration of Teller's contribution to national defense, Sakharov made critical remarks about SDI when he addressed the gathering. "I consider the creation of such a system to be a great error he said. […] If such space-based systems are deployed, even before they are armed with nuclear weapons, there will be a temptation to destroy them, and this in itself might trigger a nuclear war."[35] In spite of the authority of his opponent who was considered both as a dissident and the father of the Soviet hydrogen bomb, Edward Teller responded to his criticism later in the evening "in a dismissive way"[36]. In his memoirs, he wrote: "I noted that Sakharov had been cut off from all work of a classified nature, that his sources of information were limited, and that he couldn't possibly know the technical details of the U.S. program."[37] This case does not involve the notions of proliferation or deterrence but shows how accusations of incompetence and lack of information are used to delegitimize a transformative approach to orthodox nuclear weapon policy, even when it comes from an authoritative source.

The accusation of incompetence can also be associated with the stigma of utopianism and naiveté; this is the other avenue for delegitimizing transformative voices and maintaining that utterances about proliferation and deterrence are purely descriptive and tell the truth about the state of the nuclear world. Brown and Deutsch offer a perfect example of this. They write: "hope is not a policy, and, at present, there is no realistic path to a world free of nuclear weapons." And they insist: "Nuclear weapons are not empty symbols […] Foreign policy must be based on this reality." The reader is not told what the criteria of a realistic path are but they claim to possess a knowledge that is driving their policy advice as opposed to an emotional and supposedly unrealistic and naïve project.

The ambitions of utterances based on proliferation and deterrence to have an effect on the world also feed into another kind of delegitimizing strategy beyond the accusation of incompetence: political stigmatization as *dangerous*. You are jeopardizing deterrence and compromising non-proliferation efforts by questioning their efficacy or the reality of the diagnosis of proliferation and deterrence. Brown and Deutsch also mobilize this type of

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[35] Peter Goodchild, *Edward Teller. The Real Dr Strangelove* (London: Weidenfeld & Nicolson, 2004), p. 383.

[36] Istvan Hargittai, *Judging Edward Teller. A Closer Look at One of the Most Influential Scientists of the Twentieth Century* (Amherst: Prometheus Books 2010), pp. 418-419.

[37] Edward Teller with Judith Shoolery, *Memoirs: A Twentieth Century Journey in Science and Politics* (Cambridge, MA: Perseus Publications, 2001), p. 549; Joseph Palca, "Teller and Sakharov meet at Last in Washington", *Nature* 336, 24 November 1988, p. 299.

argument. "The goal, even the aspirational goal, of eliminating all nuclear weapons is counterproductive. […] It risks compromising the value that nuclear weapons continue to contribute, through deterrence, to U.S. security and international stability."[38] A mere official discourse that sets an aspirational goal and not actual reductions is expected to be enough to compromise deterrence. A similar argument could be made against those who look at the effects of non-proliferation policies: even if you do not change the non-proliferation policy but only question its framing, you are making proliferation more likely by questioning a category that intends to raise awareness about its danger.

The problem of the expected veto player creates a third avenue for delegitimation of transformative voices by claiming that their effort is *futile*. It suggests that convincing people might not affect their practices, not even their discursive practices. Therefore, this problem might be generalized to say that the effort of innovation is futile anyway. For example, Deutsch and Brown write that "Nuclear weapons […] play an important deterrent role, and cannot be eliminated." The supposed belief of other states in the enduring deterrent value of nuclear weapons is decisive in the making of this claim. They add: "In any case, even in the absence of overwhelming superiority in nuclear weapons, the great predominance of U.S. conventional forces would remain a strong motive for aspiring states to seek nuclear weapons."[39] Let us neglect the inability to conceive change in the security calculus of one given actor over time. In such an approach, there will always be others who are presumed to believe that nuclear weapons are still useful to them, which appears to be enough to make the entire effort to bring transformation futile. Brown and Deutsch conclude accordingly that "the vision of zero nuclear weapons is [*not*] politically *useful* for making decisions on […] reductions today".[40] The persistence of the consideration of the expected veto player makes the goal of eliminating nuclear weapons impossible to achieve. Therefore, pursuing it is futile.

One might observe that the delegitimizing strategies I depicted are close to the typical structure of conservative arguments against proposals for change: the desire for change comes

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[38] Early British nuclear history offers another interesting example of this dynamic. As one Air Ministry official explained in 1962, the proponents of the nuclear force would never concede that there was a threshold under which the "deterrent" would not be effective because "this would be *dangerous*, since there are numbers of people in the discussion who would jump at such a conclusion." Note by Kent, 19 January 1962, TNA/AIR/19/998 [Italics added], quoted in Richard Maguire, '"Never a Credible Weapon": Nuclear Cultures in the British Government during the Era of the H-Bomb", *British Journal for the History of Science* 45, no. 4 (2012), p. 529.
[39] Deutsch and Brown, "The Nuclear Disarmament Fantasy".
[40] Author's italics.

from incompetence – either ignorance or naiveté – and either it is dangerous or it will not make any meaningful difference. I directly borrow the futility thesis from Albert Hirschman's *The Rhetoric of Reaction*. The accusation of being dangerous is a combination of what he calls the perversity thesis or thesis of the perverse effect and the jeopardy thesis. Criticizing deterrence and non-proliferation policies is therefore portrayed as both perverse and jeopardizing. It intends to provide more security but is suspected of leading to less through a weakened deterrent effect and a higher probability of proliferation; these results jeopardize two fragile and precious achievements, the conservative would say, peace through nuclear deterrence and a stable nuclear order without further proliferation.

If so, proponents of transformative change should possess reverse rhetorical tools like the progressives have to discredit the conservatives.[41] This is not true in the nuclear arena for three reasons. First, the high level of secrecy and technical complexity of nuclear technology suggests that only those who work with the weapons are entitled to make authoritative pronouncements. This places the burden of proof entirely on the transformative side – either a minority in the nuclear complex or outsiders. Their burden is also legal, when they are government employees. A dissenter from the Lawrence Livermore National Laboratory expressed it perfectly during the SDI controversy: "One side has access to classified information and can say whatever it wants and not go to jail, whereas we [the skeptics] can't say whatever we want. We would go to jail. That's the difference."[42] Second, given that transformative voices know that they are a particularly small minority in the field, the problem of expected veto player is all the more striking. Third, those who are trying to bring transformative innovation use at least one of the two problematic terms we have identified – proliferation and deterrence – and the utterances associated with them to build their case. This has been true for four decades, from the Swedish diplomat Alva Myrdal in the 1970s to Kissinger, Nunn, Perry and Schultz from 2007 onwards. Myrdal uses the proliferation paradigm to criticize the lack of progress in disarmament; the "four horsemen" expand the proliferation paradigm from state to non-state non-deterrable actors[43] and preserve the notion of nuclear deterrence to account for the Cold War period. Stanford physicist Sidney Drell, who is the fifth author of the 2007 *Wall Street Journal* op.-ed. and George Shultz even see

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[41] See Hirschman, *The Rhetoric of Reaction*, chapter 6 on progressive rhetoric.
[42] Quoted in Hargittai, *Judging Edward Teller*, p. 409.
[43] This critique has already been elaborated by Anne Harrington, "The Strategy of Non-proliferation: Maintaining the Credibility of an Incredible Pledge to Disarm", *Millenium* 40 no. 1 (2011), pp. 4-5. See also Philip Taubman, *The Partnership. Five Cold Warriors and Their Quest to Ban the Bomb* (New York: Harper, 2012), chapter 23.

virtual nuclear deterrence as a tool for enforcement of non-proliferation in a world without nuclear weapons.[44] The title of the 2011 op.-ed. signed by the four horsemen, "Deterrence in the Age of Proliferation" is very telling in that regard.[45]

Targeting assumptions and expected effects

I have just argued that the delegitimizing strategies usable to frame acceptable innovation and exclude transformative voices cannot be used in reverse against the conservative camp. Based on the obstacles outlined above, this section identifies a most promising new target for transformative innovation and attempts at re-imagining the existing order.

Because they are exposed to a systematic rebuttal invoking incompetence anyway[46], transformative voices would be better off questioning the historical, ethical and political assumptions supporting the currently accepted nuclear knowledge, including the mainstream notions of proliferation and deterrence. The enterprise of re-imagining the current order would indeed be groundless without this ethical and political foundation.

This apparently modest claim is actually very promising when applied to the second delegitimizing strategy: the one that accepts that proliferation is a self-denying prophecy and that deterrence is a self-fulfilling one and therefore portrays opponents of these claims as dangerous. This rhetoric was designed in the name of deterrence and non-proliferation as desirable policy outcomes. So, if one establishes that utterances about deterrence and proliferation can be counter-productive and in any case have unpredictable effects on the credibility of deterrence and the likelihood of proliferation, the delegitimizing rhetoric in the name of danger loses its *raison d'être.* Consequently, the incentives noted above to radicalize

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[44] Sidney D. Drell and Raymond Jeanloz, "Nuclear Deterrence in a World without Nuclear Weapons" in Shultz, Drell and Goodby, eds., *Deterrence. Its Past and Future*; George Shultz, "Foreword", in George P. Shultz, Sidney D. Drell and James E. Goodby, eds., *Deterrence. Its Past and Future*, *A Summary Report of Conference Proceedings Hoover Institution November 2010* (Stanford: Hoover Institution Press, 2011), p. viii.

[45] Henry Kissinger, Sam Nunn, William J. Perry and George Shultz, "Deterrence in the Age of Proliferation", *Wall Street Journal*, 7 March 2011. See also Henry Kissinger, Sam Nunn, William J. Perry and George Shultz, "Next Steps in Reducing Nuclear Risks", *Wall Street Journal*, 6 March 2013, p. A21, which has the following subtitle: "The pace of nonproliferation work today doesn't match the urgency of the threat".

[46] The previous section showed that even eminent physicist Andrei Sakharov could not avoid it. The same could be said for the proponents of nuclear winter, in spite of the publication of two articles in *Science*, arguably the most prestigious scientific journal. See Paul Rubinson, "The global effects of nuclear winter: science and antinuclear protest in the United States and the Soviet Union during the 1980s", *Cold War History* 14, no.1, pp. 52-58.

pro-deterrence or anti-proliferation judgments *because* of their expected effects also vanish. Even the effect of self-censorship of potential transformative voices would at least decrease.

This thought experiment identifies the assumption about utterances including proliferation and deterrence that should become the primary target of transformative thinking about nuclear weapons. We assume that we can anticipate the *actual* effect of these utterances: ie. that "deterrence [works] as a self-fulfilling prophecy"[47]; and also that "fears of a world of runaway global proliferation [become] a self-denying prophecy"[48]. These are only their *intended* effects, however. They assume that non-proliferation and deterrence efforts will be successful and not have strong adverse effects and that we can know it for sure.[49] All of this is contestable.

As Lewis Dunn aptly notes, for instance, "warnings of runaway proliferation […] could well have become a self-fulfilling prophecy".[50] As a matter of fact, these warnings express a feeling of incomparable threat from the other's nuclear weapons, assume that the other wants them also and intend to deny them access to these weapons. Therefore, if the proliferation paradigm can raise awareness and urge action in the country in which it is used, it can also create additional incentives for others to actually pursue nuclear weapons. The anti-proliferation discourse shows that the country which intends to deny anyone access to a weapon system would be threatened if a new nuclear-weapon state emerged. Moreover, this discourse includes a suspicion of pursuit of such a weapon-system anyway. Even if these reasons cannot be enough to justify a nuclear-weapon program, it is difficult to anticipate which effect the proliferation prophecy will generate – a self-denying effect through increased mobilization at home or a self-fulfilling effect through the above-mentioned reactions – or which one will be stronger if it generates both. Finally, the proliferation prophecy could also in some cases have no effect at all.

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[47] François Heisbourg, « L'avenir incertain de la dissuasion » [The Uncertain Future of Deterrence] in François Heisbourg, ed., *Les armes nucléaires ont-elles un avenir? [Do Nuclear Weapons Have a Future?]* (Paris: Odile Jacob, 2011), p. 148 [My translation].

[48] Lewis A. Dunn, "THE NPT: Assessing the Past, Building the Future", *Nonproliferation Review* 16, no. 2 (2009), pp. 150, 169. Nicholas L. Miller tries to reaffirm this in his recent "Nuclear Dominoes: A Self-Defeating Prophecy?", *Security Studies* 23, no. 1(2014).

[49] The third point is not specific to the nuclear world. It has to do with the epistemological inability to achieve certainty about future reactive behavior in complex systems.

[50] Dunn, "The NPT", p. 150.

Let me give two examples in which the effects of the proliferation prophecy were counterproductive or ambiguous.[51] The efforts to prevent India from testing nuclear weapons between 1974 and the 1990s might actually have given additional incentives to test. Studies of the discourse of proliferation have established that it is based on a suspicious interpretation of uncertainty and retrospective relabeling.[52] This suspicion and relabeling have played a strong role in the domestic and international interpretation of the Indian 1974 peaceful nuclear explosion called "smiling Buddha". While the Indians claimed it as a demonstration of capability and did not weaponize in the next twenty years, the so-called international community started to treat India as a proliferator. It retrospectively interpreted this explosion as the sign that India was proliferating and had to be regarded and monitored appropriately. All the doubts and debates in India about the need to develop a military capability were reduced to the affirmation of a quest for nuclear statehood. Itty Abraham argues that every Indian claim for the peaceful purposes of the program was read as a cover up confirming previous suspicions. So, the proliferation prophecy rejected the ambiguity of the 1974 test and, portraying India as a *de facto* proliferator it converged with the parochial interests of scientists seeking more resources and a general intellectual bravura in the name of national pride: they led India to test and, by doing so, to reduce the ambiguity of the meaning of its nuclear history.[53]

Second, the consequences of the bombing of Osirak by the Israeli Air Force in May 1981 provide a good example of how difficult it is to identify and measure the contradictory effects of a non-proliferation policy. In the short term, this counter-proliferation operation resulted in an increased effort by Iraq to build nuclear weapons. Instead of interrupting its effort following the destruction of the reactor, the Iraqi regime allocated unprecedented human and financial resources to its nuclear weapons program. Its determination was reinforced by the bombing. Saddam Hussein even decided to release a scientist who had previously been sent to jail for opposition to the regime so that he could speed up the program.[54] However, even

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[51] For more examples of the counterproductive effects of non-proliferation policies, see John Mueller, *Atomic Obsession. Nuclear Alarmism from Hiroshima to Al Qaeda* (Oxford: Oxford University Press, 2009), pp. 143-158.
[52] Pelopidas, "The Oracles of Proliferation", pp. 300, 308.
[53] Itty Abraham, "Contra-Proliferation. Interpreting the Meaning of India's Nuclear Tests in 1974 and 1998" in Scott Sagan, ed., *Inside Nuclear South Asia*, (Palo Alto: Stanford University Press, 2009), pp. 122-128; Karthika Sasikumar, *Regimes at Work: The Nonproliferation Order and Indian Nuclear Policy*, Ph.D. dissertation, Cornell University, Department of Government, 2006, p. 2.
[54] Dan Reiter, *Preventive War and its Alternatives: the lessons of history* (Carlisle: Strategic Studies Institute, 2006), p. 6; Malfrid Braut-Hegghammer, "Revisiting Osiraq. Preventive Attacks and Nuclear Proliferation

critics of the bombing, who judge it ultimately to have been counterproductive, recognize that one of its consequences, *ie* the shift towards highly enriched uranium as a privileged pathway towards the bomb, put Iraq on a "more difficult and time consuming route".[55] These two examples suggest that the intended effects of the proliferation prophecy should not automatically be considered to be actual effects.[56]

Analysts of deterrence are confronted with a comparable difficulty, which is most often denied. Vipin Narang writes about an "existential bias" as if the mere existence of the weapons and a so-called second-strike capability intended to deter was enough to actually do so.[57] If a deterrent threat was perceived as unacceptable by its target, as possibly hiding an intention to attack, then criticizing deterrence could be helpful rather than dangerous. The critique can work as a de-escalation measure in this case; it can be read as revealing that this threat is not credible anyway and should not be taken seriously; it can also reopen a conversation about the ethical and political justifications of continued nuclear vulnerability. Indeed, critiquing a strategy of deterrence does not necessarily lead to an undesirable outcome because this strategy can produce the effects it intended to prevent in the first place. As Ned Lebow wrote, summarizing two decades of research, "threat-based strategies are risky. They can provoke the very kind of behavior they are implemented to prevent if they are perceived as offensive in intent. When this happens, […] the target may conclude that restraint will be interpreted as weakness and invite more provocations, whereas toughness holds out some chance of inducing restraint. The roles of defenders and challengers are considered unproblematic by deterrence theorists and practitioners. Would-be deterrers consider their defensive motives for threatening force self-evident [Here I would add: or at least potentially believable] but this is not often the case."[58] Of course, one would need to specify what kind of

Risks", *International Security* 35, no. 1 (2011), pp. 109, 117, 129; Imad Kaddhuri, *Iraq's Nuclear Mirage. Memoirs and Delusions* (Toronto: Springhead Publishers, 2004), pp. 72-73; Sarah Kreps and Matthew Fuhrmann, "Attacking the Atom. Does Bombing Nuclear Facilities Delay Proliferation?", *Journal of Strategic Studies* 34, no. 2 (2011), p. 171.

[55] Braut-Hegghammer, "Revisiting Osiraq", p. 102; Kreps and Fuhrmann, "Attacking the Atom", pp. 171-172.

[56] The most recent studies of the non-proliferation effort vis-à-vis Iran fundamentally disagree about the effects of psychological warfare. See the review essay by Philipp Bleek and David Vielhaber, "Shadow Wars", *Nonproliferation Review* 19, no. 3 (2012), pp. 487-488. For an argument emphasizing the counterproductive effects of Western non-proliferation policies vis-a-vis Iran, see Patrick Disney, "Kicking the Hornet's Nest. Iran's Nuclear Ambivalence and the West's Counterproductive Nonproliferation Policies", *Nonproliferation Review* 19, no. 2 (2012).

[57] Vipin Narang, "What does it take to deter? Regional Power Nuclear Postures and International Conflict", *Journal of Conflict Resolution* 57, no. 3 (2013), p. 479.

[58] Richard Ned Lebow, "Deterrence: Then and Now", *Journal of Strategic Studies* 28, no. 5 (2005), p. 767. See also Richard Ned Lebow and Janice Stein, "Beyond Deterrence", *Journal of Social Issues* 43, no. 4 (1987) and Richard Ned Lebow and Janice Stein, *We All Lost the Cold War* (Princeton: Princeton University Press, 1994),

behavior is intended to be deterred to be able to measure more accurately success and failure. A consensual view is that strategies of nuclear deterrence are intended primarily to deter a nuclear attack and invasion. If so, increasing the likelihood of crises involving nuclear weapons actors and making the participants in such crises more risk prone is the opposite of what a strategy of deterrence intends to achieve.[59] However, these were precisely the effects of a strategy of deterrence at several critical moments during the Cold War.[60]

One case is Kennedy's strategy of deterrence in 1961. After Khrushchev's ultimatum on Berlin, he hoped to deter him from escalating the crisis. So he emphasized, both privately and publicly, U.S. nuclear superiority, and his willingness to conduct a nuclear first strike. The result was an increase in the tension between the two countries in the months leading to the Cuban missile crisis.[61] In the longer term, the strategies of deterrence developed by the two superpowers from the late 1950s to October 1962 led to an increased threat perception[62] and provided at least a "useful justification" for consistent arms build-ups and enhancements at every level.[63]

These events exemplify the adverse effects of immediate deterrence among great powers in a context of high threat perceptions. Patrick Morgan rightly argues that: "[This unilateral build-up] was presented as contributing to deterrence. […] At the strategic level the desire to effectively target the opponent's forces for a pre-emptive attack invited the situation deterrence theory stressed was the most dangerous – a strong mutual incentive to strike first in a crisis."[64]

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pp. 325, 338-339 for an elaboration of how the strategy of deterrence inhibits the critical assessment of challenges, exacerbates threat perceptions, perceives adversaries as "opportunity driven" actors who would take advantage of any gap in deterrent threats by attacking.

[59] A counter-argument here would be to say that deterrence does actually work when the context makes the threat of attack more credible, ie only after a given level of escalation in the crisis. Would the population at risk accept this reasoning and tolerate such a risk though?

[60] Richard Ned Lebow, "Conventional vs Nuclear Deterrence: Are the Lessons Transferable?", *Journal of Social Issues* 43, no. 4 (1987), pp. 188-189.

[61] Lebow and Stein, *We All Lost the Cold War*, chapter 2; see also Vojtech Mastny, "Introduction" and "Imagining War in Europe. Soviet Strategic Planning" in Vojtech Mastny, Sven G. Holtsmark and Andreas Wenger, eds., *War Plans and Alliances in the Cold War. Threat Perceptions in the East and West* (London: Routledge, 2006), pp. 3, 38.

[62] Lebow, "Conventional vs Nuclear Deterrence", p. 179. Francis Gavin notes that both the US and the Soviet Union saw the stakes as higher for themselves and saw themselves as the deterrer while the other side was the aggressor. *Nuclear Statecraft. History and Strategy in America's Atomic Age* (Ithaca: Cornell University Press, 2012), 57-74.

[63] Patrick Morgan, "The practice of deterrence" in Emanuel Adler and Vincent Pouliot, eds., *International Practices* (Cambridge: Cambridge University Press, 2011), p. 155.

[64] Ibid.

It is worth noting that similar effects have been identified for general deterrence and a context of lower threat perception, precisely because the leaders were so convinced of their adversary's determination to avoid nuclear war that they tried to take advantage of it and obtain unilateral advantages. This is why the US Ambassador to the Soviet Union regarded the situation over Berlin in 1961 as prone to misperceptions and war[65]; this is the framework in which the superpowers crisis in the Middle East after the 1973 war emerged.[66]

Favorable outcomes of crises involving strategies of nuclear deterrence have also been recognized as independent from deterrence, and due to luck. In those cases, the impact of the critique on the deterrent effect does not matter since deterrence is beside the point, but the critique can bring awareness of the risks of overconfidence, recognize the limits of what can be known about and learned from nuclear crises and make explicit the bets on the future which underpin continued reliance on nuclear weapons. For example, no accidental detonation took place during the Cuban missile crisis in spite of the many accidents involving US nuclear weapons in the early 1960[67] and US and Soviet leaders as well as operators of nuclear weapons took the right decisions in spite of very limited and sometimes false information and misperceptions on both sides.[68]

In summary, the prophecies of proliferation and deterrence have been counterproductive in several cases and their net effect is hard to determine in many others. Therefore, the idea that questioning the efficacy of non-proliferation or deterrence policies is more dangerous than supporting them should not be taken at face value. This skepticism is a starting point for re-imagining global nuclear ordering.

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[65] He wrote that: "Both sides consider other would not risk war over Berlin. Danger arises from fact that if K carries out his declared intentions and we carry out ours, [the] situation [will] likely get out of control and military as well as political prestige would become involved making retreat for either side even more difficult." Telegram from the Embassy in the Soviet Union to the Department of State, 27 May 1961, FRUS, 1961–1963, Volume XIV, 77. See the broader analysis by Gavin, "Policy, History and the Ivory Tower-Policy Gap", pp. 577-581.

[66] Lebow and Stein, *We All Lost the Cold War*, chap. 10 and 13. See also Marc Trachtenberg, "Waltzing to Armageddon", *The National Interest*, September 2002.

[67] See Eric Schlosser, *Command and Control* (New York: Allen Lane, 2013), part IV.

[68] Then Secretary of Defense Robert S. McNamara and Soviet head of Cuban affairs for KGB Nikolai Leonov, alongside most analysts, agree on this. See Robert S. McNamara, "Apocalypse Soon", *Foreign Policy* n°148, May-June 2005, p. 33 and Thomas S. Blanton and James G. Blight, "A Conversation in Havana," *Arms Control Today* 32, no. 9 (2002), p. 7.

Conclusion: avenues for re-imagining global nuclear ordering

Re-imagining global nuclear ordering requires focusing on the fate of transformative voices and the framing of acceptable conceptual innovation. I have argued that the status of the words "proliferation" and "deterrence" and the invocation of a player believing in the orthodoxy who is expected to block proposals for change create three avenues for delegitimizing transformative thinking. Because utterances based on these two words do double work and those who use them want at the same time to describe the world as it is and act upon it, they shape a space in which transformative thinking appears incompetent and dangerous. The supposed existence of a veto player who leads you to maintain the same practice even if you have changed your mind makes critical thinking look futile.

However, calling into question the validity of the intended self-fulfilling or self-denying effect of these prophecies offers a way out of the deadlock and could render one of the current delegitimizing strategies powerless. Instead of trying to argue inside the proliferation paradigm or the categories of the discourse of deterrence, voices who intend to bring transformative conceptual innovation have to create a space to speak by challenging first and foremost the certainty of the self-fulfilling or self-denying effect of the prophecies of proliferation and deterrence. Doing so would remove the grounds on which their thinking is *a priori* delegitimized as well as the self-censorship and the tendency to radicalize judgments in the name of the expected effects of proliferation and deterrence prophecies.

Epistemological modesty should be encouraged and lead analysts to recognize the limits of what we know about nuclear history, the role of luck in human affairs, and the impossibility to infer claims about the future from claims about the past independently from political judgments.

A renewed look at the historical record is decisive because the confusion between the intended and actual effects of the discourses about proliferation and deterrence comes from a belief that the historical record provides universal evidence for these effects.[69] Historical investigation could restore contingencies against the appeal of a deterministic understanding of history, retrospective denial of the role of luck and neglect of alternative counterfactuals which fuel established certainties about the effects of the discourse about proliferation and

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[69] See the above quotes by Heisbourg and Dunn. One should then welcome the "renaissance" of historical studies of nuclear weapons related issues. See the H-Diplo/ISSF Forum on "What We Talk About When We Talk About Nuclear Weapons.", June 2014.

deterrence. Since the authority of those categories derives from their paradoxical longevity, as I noted at the beginning of this essay, intellectual history should also call it into question by questioning the variation in the meaning of these and other long-lasting categories across time and space.[70]

Reconsidering the condition of nuclear vulnerability appears as a fruitful shift of the conversation which reopens possibilities for transformation. By nuclear vulnerability, I mean that there is no protection against a nuclear strike, whether or not it is intentional. This has been the case at least since nuclear-tipped ballistic missiles can be launched underwater from a submarine which is impossible to detect. As a consequence, destroying the missile before it is launched became impossible and it is well established that existing civil defense programs make promises impossible to keep.[71] Even if the current missile defense project could be made credible – there is no need for it to work; it just needs to be credible –, it is not intended as a complete protection against a nuclear strike, for two reasons. First, it focuses on threats from regional powers only. Second, it is a U.S. system and there is no prospect of sharing it. However, nuclear vulnerability has been overlooked as a condition for security through deterrence, in a context of proliferation. Going back to nuclear vulnerability itself as a problem will force to recognize the role of accidents and luck in nuclear outcomes, in tune with the above call for epistemological modesty; it will also reveal that deterrence and non-proliferation are specific political responses to a situation, which are neither perfect nor inevitable. It will finally be compatible with a reconsideration of "nuclear winter", one of the few major intellectual innovations which did not emerge under "proliferation" or "deterrence", came from outsiders and has had an impact.[72]

The problem of the expected veto player in nuclear policy is probably the best indicator of what is at stake with the introduction of transformative thinking in the conversation about nuclear weapons. It reminds us that the strategies for change outlined above will not suffice to change practices. Institutional and more structural changes would be

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[70] An early attempt along those lines can be read in Benoit Pelopidas, "Pour une histoire transnationale des categories de la pensee nucleaire" [Toward a transnational history of nuclear categories], *Strategique*, April 2015.
[71] Lee Clarke, *Mission Improbable. Using Fantasy Documents to Tame Disaster* (Chicago: University of Chicago Press, 1999), 30-40; 90-97; Dee Garrison, *Bracing for Armageddon. Why Civil Defence Never Worked*, (Oxford: Oxford University Press, 2006).
[72] Rubinson, "The global effects of nuclear winter", Lawrence Badash, *A Nuclear Winter's Tale* (Boston:MIT Press, 2009), 76.

required. The suggested approach might only result in diminishing confidence in common discursive practices and justifications for current policies.

This apparently minimal effect would actually be decisive though, in two ways: it would confront the claims for security through deterrence and non-proliferation to the recognition of nuclear vulnerability; it would redefine nuclear choices as involving ethical and political judgments and bets on the future beyond experts' competence or the *diktat* of necessity.