

Dilemmas of Nuclear Force “De-Alerting”

by

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The debate over so-called “de-alerting” of nuclear strike forces is one that has become a recurring subject of discussion in the Conference on Disarmament (CD) in Geneva, and at the U.N.’s First Committee and General Assembly in New York. De-alerting has been a focus of attention in arms control circles at least since the 1996 report of the Canberra Commission on Eliminating Nuclear Weapons – which recommended “[t]aking nuclear forces off alert” so as to “reduce dramatically the chance of an accidental or unauthorised nuclear weapons launch.”¹

One method of doing this, suggested by the Commission, was “removal of warheads from delivery vehicles,”² but various others have been suggested. Whatever the method, the purpose of de-alerting is to impose unavoidable delays before nuclear use becomes possible – requiring possessors to take “several

hours, days, or months to prepare for launch”³ – so as

“to eliminate the threat of an accidental nuclear conflict by allowing the top leadership of nuclear nations sufficient time to perform a comprehensive evaluation of the situation at hand and therefore to make adequate decisions.”⁴

Reducing the risk of accidental nuclear war would seem, in itself, to be a worthy enough ambition. Some advocates of de-alerting, however, also see such measures as being part of a greater program. De-alerting has been described by one senior U.N. disarmament official, for example, as a “stepping stone” toward achieving

¹ See Canberra Commission on Eliminating Nuclear Weapons (August 1996), from the Executive Summary, available at http://www.dfat.gov.au/cc/cc_report_exec.html.

² *Id.*

³ Interfaith Committee on Nuclear Disarmament, “How to Get to Zero” (undated), available at <http://www.zero-nukes.org/howtogettozero3-dealerting.html>.

⁴ See, e.g., A.G. Arbatov et al., “De-alerting Russian and US nuclear weapons: A path to reducing nuclear dangers” (Moscow: Institute of International Economy and Foreign Relations, Russian Academy of Sciences, 2001) (, available at <http://www.ieer.org/russian/pubs/dlrbk-e.html>).

nuclear disarmament.⁵ Whether or not that is the case – and as we shall see, there are grounds to suspect that the impact of de-alerting could be somewhat ambiguous in that regard – de-alerting has become a high priority for many delegations in multilateral diplomatic fora. It was, for instance, the subject of a General Assembly resolution adopted in December 2007.⁶

De-Alerting to Address Accident Risks

Nevertheless, as I see it, much of the debate over this issue is misplaced. The argument for de-alerting is usually based upon the oft-repeated claim that U.S. and Russian forces⁷ have been and remain on “hair-trigger alert,” and that this is enormously destabilizing. Since “hair-trigger alert” is not a term

apparently actually used by strategic planners in any state possessing nuclear weapons, it is not always quite clear what this means – though the term is clearly pejorative, for it certainly sounds alarming to say, even poetically, that the commencement of nuclear holocaust hangs upon the potential wavering of a “hair.” Translated into terms that might actually make sense to strategic planners, the de-alerting debate seems to be based upon the idea that U.S. and Russian forces are in a “launch-on-warning” (LoW) posture – that is, that it is expected that large numbers of warheads will be dispatched toward their targets in the time between warning of a surprise attack and the arrival of the first enemy warheads.⁸

The logic of launch-on-warning is supposed to be that it responds to the extreme vulnerability of one side’s delivery systems by facing a potential attacker with the knowledge that he too would face oblivion even if his victim could not hope to have a meaningful second strike retaliatory force in existence after the aggressor’s first strike. Deterrence would be, in other words, rooted in the fact that the victim’s warheads would already be on the way to their targets before the aggressor’s weapons reached their own.

De-alerting advocates apparently believe in this logic themselves, for it is their assumption that the nuclear weapons states have long found it irresistibly compelling. One proponent of de-alerting, for instance, wrote

⁵ U.N. Under Secretary General for Disarmament Affairs Jayantha Dhanapala, “The De-Alerting of Nuclear Weapons: The International Political Context,” remarks in Stockholm, Sweden (October 10, 1998), available at <http://disarmament.un.org/speech/10Oct1998.htm>.

⁶ United Nations General Assembly Resolution A/RES/62/36 (10 January 2008), available at <http://daccessdds.un.org/doc/UNDOC/GEN/N07/465/93/PDF/N0746593.pdf?OpenElement>.

⁷ In principle, de-alerting is an issue with relevance to all nuclear weapons possessors. In practice, advocates tend to focus almost entirely upon U.S. and Russian nuclear forces – on the usually unexamined assumption that where Washington and Moscow go, all others will follow. See, e.g., Bruce Blair, “Nuclear Dealerting: A Solution to Proliferation Problems,” *Defense Monitor*, vol.xix, no.3 (2000) (emphasis added), available at <http://www.cdi.org/dm/2000/issue3/dealerting.html> (contending that U.S. and Russian de-alerting would somehow “create a norm of operational safety that prohibits any country from placing or maintaining their nuclear forces in a launch-ready configuration”) (emphasis added).

⁸ The U.S. nuclear strategist Herman Kahn once described launch-on-warning as a “hair-trigger tactic.” Herman Kahn, *Thinking the Unthinkable in the 1980s* (New York: Simon & Schuster, 1984), at 50 & 138.

recently that under the conditions of Cold War arms competition, “the only military ‘solution’ seemed to require the launch of ICBMs [intercontinental ballistic missiles] from their silos *before* they were destroyed.” Even today, he contended, the “only purpose” imaginable for having a LoW capability is in order to adopt “a *policy* of LoW,” which “becomes standard operating procedure, written into warplans, and operational manuals.”⁹

The obvious drawback of a LoW posture is its strategic brittleness. In the few minutes between warning of an attack and the point at which the victim’s own launch order must be given if his delivery systems are to escape the impending firestorm, there is not much time in which to evaluate the situation, and decisions made under conditions of such stress and time pressure may not always be carefully considered. With reaction times so short, nuclear holocaust could conceivably result from one side’s entirely accidental launch, or an error in the other side’s warning system.

In an appreciation for the fragility of a deterrent relationship based upon LoW postures lies the main argument for de-alerting, which aims to arrange things so that one simply *cannot* launch *any* delivery systems quickly. Pointing to various incidents in which U.S. or Russian nuclear alerts were triggered by false alarms – *e.g.*, erroneous readouts from U.S. warning systems in 1961, 1962, 1979, and 1980, a communications confusion between U.S. military components in 1963, and a

Russian alert as a result of confusion over the innocuous launch of a research rocket in Norway in 1995¹⁰ – de-alerting advocates ask: how long would it otherwise be before “hair-trigger” alert postures allow such an error to bring about the end of the world? Herein, they say, lies the imperative of setting in place measures that would *prevent* launch orders from being executed with any rapidity.

Debating the “Hair Trigger”

This argument seems somewhat less compelling, however, when one realizes that it is based upon a confusion: U.S. and Russian nuclear postures apparently do *not* actually assume that launch orders will be given upon warning of attack. In fact, though the United States has always refused absolutely to *rule out* a launch-on-warning posture, apparently believing that ambiguity on this score complicates Russian planning scenarios and enhances thus deterrence¹¹ – and although U.S. alert forces *could* launch on such short notice if the President actually gave the order – U.S. strategic planners appear never to have adopted such a position.

Indeed, the United States has spent many billions of dollars to build and maintain an extremely capable ballistic missile submarine (SSBN) force

⁹ Steven Starr, “High-alert nuclear weapons: examining the risks,” *SGR Newsletter*, no.36 (Autumn 2008), at 1-2.

¹⁰ See, *e.g.*, CDR James R. Low, USN, “De-Alerting the U.S. and Russian Nuclear Arsenals: An Unlikely Method of Arms Control,” Master’s thesis submission to the U.S. Naval Postgraduate School (December 1999), at 97-100, available at <http://www.dtic.mil/cgi-bin/GetTRDoc?AD=ADA375929&Location=U2&doc=GetTRDoc.pdf>; Arbatov, et al., *supra*.

¹¹ See Lawrence Freedman, *The Evolution of Nuclear Strategy* (3d. edition) (New York: Palgrave Macmillan, 2003), at 253 & 372.

as the backbone of its deterrent posture, precisely because of the presumed invulnerability to preemptive attack of deployed U.S. submarines on “deterrent patrol.”¹² Having such a survivable force available for retaliatory strikes necessarily means that when confronted with what appears to be an incoming Russian attack, U.S. leaders would *not* necessarily face irresistible “use it or lose it” pressures to launch immediately.

Since the end of the Cold War, moreover, the U.S. force posture has evolved further away from maintaining a rapid reaction capability and high alert levels, and today few of the operationally deployed U.S. nuclear forces are maintained on a ready alert status capable of immediate launch even if this *were* American policy. The United States carefully maintains the *ability* to respond promptly to any attack in order to complicate any adversary’s planning and thereby enhance deterrence, but it does *not* assume LOW. (Nor, however, does it ever discuss

¹² During the late Cold War, it came to pass that *Soviet* SSBN patrols were not necessarily equivalently invulnerable, for the U.S. Navy – in the name of better deterring Soviet aggression by making clear that in time of war the West could threaten the assets most prized by decision-makers in the Kremlin – developed at least some ability to track and thus potentially to destroy Soviet missile submarines even at sea. See generally Christopher Ford, *The Admirals’ Advantage* (Annapolis, Maryland: Naval Institute Press, 2005), at 77-108. This is presumably one of the reasons that modern Russian nuclear force structure has come to deemphasize SSBN patrols (although they have hardly been abandoned) in favor of a heavy reliance upon mobile land-based intercontinental ballistic missiles (ICBMs) – a type of target which U.S. forces found to be extremely difficult to locate and destroy even in the relatively permissive combat environment of the 1991 Gulf War.

precisely what its actual alert status is. No nuclear weapons state does.¹³) As the U.S. Ambassador to the CD quipped at one point, in response to a request that the United States abandon its “hair-trigger” alert policy,

“Frankly, in order to take action to comply with this request, we would first have to *put* our weapons on ‘hair-trigger alert,’ so we could then de-alert them. The fact is that U.S. nuclear forces are not and have never been on ‘hair-trigger alert.’”¹⁴

¹³ Relating, as they do, to how vulnerable one’s strategic deterrent may be and the conditions under which it might perhaps be caught napping, the sort of details most relevant to de-alerting debates – e.g., about which forces are on precisely what sort of alert, how long it might take them to launch, what procedures are used to verify attack-warning data, and the strengths and weaknesses of early warning systems and nuclear command-and-control (C²) linkages – can be among the most sensitive items of information any nuclear weapons state possesses. No one should expect any nuclear weapons state to be more than minimally, and grudgingly, forthcoming about such issues.

This is, of course, annoying to advocates of de-alerting, the appeal of whose argument hinges in large part upon the conclusion that the nuclear states do not – and indeed *cannot* – handle these matters in ways that reduce accident risks to acceptable levels (whatever that means). At the same time, these security restrictions, however understandable, limit the degree to which nuclear powers are able persuasively to defend themselves against accusations such as the claim that their forces are maintained on “hair-trigger alert.” Both sides, in other words, appear to be locked in a balance of mutually assured frustration.

¹⁴ Permanent Representative Christina Rocca, remarks at the Conference on Disarmament (October 9, 2007) (emphasis added), *available at* http://www.accessmylibrary.com/coms2/summary_0286-33136748_ITM.

This refusal to adopt launch-on-warning as *policy* presumably results from U.S. planners' longstanding appreciation for the same potential risks of accidental or mistaken launch to which "de-alerting" partisans point today. It also may have stemmed, however, from the suspicion that an ostensible launch-on-warning posture would not in fact *deter* – either because one's opponent might develop clever ways to spoof or defeat early warning systems, or simply because it might not be *believed* that a U.S. President would in fact take the fateful step of "pressing the button" on the basis of what might be a mistake. As Herman Kahn summed things up in his 1960 book *On Thermonuclear War*,

"Sole reliance on warning and quick reactions may be an unreliable security measure ... partly because dependence on some kinds of quick reaction so increases the chance for an unpremeditated war that the quick reaction schemes tend to be a façade; the buttons are not really connected. Additionally, quick reaction seems particularly susceptible to degradation by clever tactics on the part of the enemy that have been overlooked or underestimated."¹⁵

To be sure, there are some suggestions that the Soviets might, at least for a while, have adopted – or have wished the United States to believe they

had adopted – a launch-on-warning policy. Lawrence Freedman, for example, quotes comments from Soviet officials in the 1960s and 1970s that arguably imply this.¹⁶ Nevertheless, in more recent years, this appears less likely to be the case. Russia seems markedly to have *increased* its overall reliance upon nuclear weapons since the end of the Cold War, but this by no means necessarily entails adoption of operationally brittle launch-on-warning policies. In fact, Russia's reliance upon ICBM missile silos hardened considerably beyond U.S. practice, remarkably extensive underground facilities for the protection of leadership assets,¹⁷ at least a small SSBN force capable of undertaking deterrent patrols, and a growing arsenal of mobile ICBMs suggests that Moscow wishes to reserve the option of – and may indeed anticipate – "riding out" an attack rather than launching in response to "use or lose" considerations.

Though one should always be wary of assuming that the other side shares one's own perceptions and assumptions, it seems likely that both Russian *and* American nuclear forces are today planned and postured in order to provide their national leadership with maximum decision-making time and flexibility. This means neither depending upon LoW nor entirely ruling it out, each side thereby hoping better to deter its opponent by denying the other side any conceivable basis for a

¹⁵ Herman Kahn, *On Thermonuclear War* (Princeton, N.J.: Princeton University Press, 1961), at 256-57. Writing in 1983, Kahn described launch-on-warning as being an "irresponsible" approach, criticizing it for being "almost certainly more accident-prone than the current system." Kahn, *Thinking the Unthinkable in the 1980s*, *supra*, at 50.

¹⁶ Freedman, *supra*, at 252-53 & 499 n.23.

¹⁷ See, e.g., K.C. Bailey & F.D. Barish, "De-Alerting U.S. Nuclear Forces: A Critical Appraisal," UCRL-LR-132030 (Springfield, VA: National Technical Information Service) (August 21, 1998), Appendix A, at 19-20.

conclusion that launching a first strike would elicit no retaliation.

Even the Canberra Commission Report of 1996, while unstinting in its advocacy of “de-alerting,” conceded that both U.S. and Soviet/Russian forces were in fact “structured to be able to ride out a first nuclear strike,” complaining merely that these forces possessed “‘launch-on-warning’ or ‘launch-under-attack’ options.”¹⁸ Yet there is a world of difference between simply being *capable* of launching quickly and having such rapid launch be considered *obligatory*, on account of radical “use-or-lose” vulnerability or simply a doctrinal choice. Fortunately, the latter circumstance does not appear to be the case: the nuclear superpowers do *not* face each other with “hair-trigger” launch-on-warning postures. Most of the de-alerting debate, therefore, is based upon a misconception about U.S. and Russian nuclear policy.

Accident Risk vs. Crisis Instability Risk

In fairness, however, it must be said that correcting this confusion over the myth of intended launch-on-warning does not entirely end things. More sophisticated advocates of de-alerting, such as the Canberra Commission, contend that even though the two nuclear superpowers do *not* actually have launch-on-warning policies and force postures, in time of a nuclear alert crisis their leaders would nonetheless experience “profound anxiety and uncertainties” that might “invoke a powerful *predisposition* toward the option of ‘launch-on-warning’ or

‘launch-under-attack.’”¹⁹ It is for this reason, the Commission reasoned, that even the mere *possibility* of rapid launch should be taken away.

To my eye, it is certainly appropriate to examine any potential pressures that might face national leaders in connection with this most critical of decisions. Launch-on-warning does not seem to be *policy*, but precisely because the nuclear superpowers seem carefully to have retained the *option* of launching some of their nuclear forces upon warning of attack, we must assume there to be at least *some* chance this option actually would be chosen.²⁰

In considering the merits and demerits of de-alerting, however, it would be unwise to limit our examination simply to those pressures (e.g., a fear of facing a strategic nuclear “use it or lose it” situation) that might conceivably influence decision-makers upon receiving an attack warning. Rather, de-alerting must be approached through the prism of its overall

¹⁹ *Id.* (emphasis added).

²⁰ It is not unimaginable that a country might actually have *ruled out* launch-on-warning – on the grounds that such a policy would be too susceptible to accident risks – but carefully to have *concealed* this fact in order to maximize the degree to which its opponent was deterred from attacking first. The value of such a bluff, however, would depend upon the absolute secrecy of this decision. (In any event, unless the very existence of the LoW option were *itself* a fraud – an illusion that it would be rather difficult reliably to maintain, at least for the United States – there would always remain the possibility that the President could change his mind about the inconceivability of actually choosing it.) For present purposes, we must assume that there is at least *some* chance that a LoW option would be used.

¹⁸ Canberra Commission Report, *supra*, from Part One (emphasis added), available at http://www.dfat.gov.au/cc/cc_report1.html.

contributions to reducing the risk of nuclear war, with any lessening of risk in one respect balanced against any *increase* in risk that might exist in another.

Specifically, de-alerting must also be evaluated with an eye to any other costs it might impose – beyond simply the question of potentially-erroneous attack warnings – for these may not be trivial. Since the point of de-alerting is to try to make the world safer, it is necessary to ask whether the impediments to operational readiness that would be deliberately imposed by de-alerting measures would – on balance – contribute to, or detract from, strategic stability. This entails dipping one's foot into the arcane of nuclear deterrent and crisis stability theory.

In essence, when asked whether de-alerting is a good or a bad idea, the answer will depend upon what one fears most: false alerts and accidental launches, or a deliberately-chosen nuclear engagement. Even in a post-Cold War world of vastly lessened antagonisms and structural rivalry between the nuclear superpowers – and the effective end of their escalating strategic arms race – this is perhaps not as obvious a choice as it might seem. We should be thankful that under present circumstances, a willful attack “out of the blue,” as it were, seems vanishingly unlikely. Yet that is not to say that any sensible strategic planner can ignore the possibility of *some* deliberate attack under *some* circumstances, for where nuclear war is concerned, it has always been understood that it is not merely a question of whether one side might choose nuclear conflict over a happy and prosperous peace.

Rather, theorists have long worried that deterrence could fail simply because a situation arose in which one side felt there to be a reasonable probability that the harm it would suffer from fighting would be less than that it would face by *not* fighting.²¹ (Japan's fateful decision to attack the U.S. Pacific Fleet in 1941 is a case in point. It was felt worthwhile to gamble on a bold debilitating surprise attack, even at the risk of starting a protracted war Japan could not win, because the anticipated alternative was Tokyo's guaranteed defeat through economic strangulation.)

Leaders, one suspects, seldom choose war in the abstract; they choose it when evaluating conflict alongside what they assess to be the other available alternatives. For this reason, while it is hard to imagine anyone desiring nuclear war *in the abstract*, it is very important to be sure we understand potential deterrence and stability dynamics *in times of crisis*, for that is where a key danger lies. To assess the relative merits of de-alerting, therefore, one should consider which possibility is, on the whole, a greater danger – over-hasty launches in response to erroneous warnings, or worsened crisis instability – and consider how de-alerting might affect the overall level of risk in comparison to available alternatives.

De-Alerting and Crisis-Exacerbation

The concern many strategic planners have about de-alerting

²¹ See, e.g., Kahn, *On Thermonuclear War*, *supra*, at 134 (arguing that, for this reason, deterrent calculations should look to the other side's estimation of “risk” in times of stress or crisis, rather than simply to its possible “gain” from belligerence).

measures is not merely that such steps would fail to address crisis stability concerns, but in fact that de-alerting could *worsen* such problems. This is by no means a trivial problem. Even if one feels that at present – under post-Cold War circumstances and with still at least partly ready-alert forces – potential errors and accidents are generally more worrisome than crisis instability, it might yet be that de-alerting could exacerbate crisis instability enough to make this particular medicine more harmful than the disease it seeks to cure. The case against de-alerting would be especially compelling if there were *other* steps available that could lessen accident risks, yet *without* imposing costs in terms of augmented crisis instability. In fact, this is exactly what I believe turns out to be the case.

Though its intention is to impose time delays in the nuclear launch cycle in which warning errors could be corrected and cooler heads prevail, de-alerting could – in time of crisis – leave leaders with *less* effective decision-making time than ever. De-alerting means there is more time that must pass before one would be capable of launching one's nuclear forces; in a crisis, this would tend to force even the coolest of heads into actions that seemed threatening to the other side – that is, into restoring nuclear forces to alert status – *earlier* than might otherwise be the case.²² This certainly would not

seem conducive to improving the chances of the nuclear powers working their way out of a crisis without catastrophe.

Under certain circumstances, moreover, even a *de-alerting* regime could be quite vulnerable to erroneous attack warnings. Should a genuinely false alarm just *happen* to occur during a crisis, the reciprocally threatening dynamics already encouraged by the re-alert pressures created by prior de-alerting might make the situation even more dangerous. False alarms occurring when both sides are already rushing back to alert status in a crisis could create worse launch-as-soon-as-you-are-able pressures than an attack warning “out of the blue,” because in that tense context it would be much harder to believe that the warning is just a coincidental error.

In short, de-alerting deals with the challenge of attack warning error-prevention at the cost of making crises more dangerous, and perhaps even increasing the likelihood that one side might at some point *choose* attacking first over some imagined alternative scenario. Because neither party might really have desired or planned for conflict in such circumstances, this might also be labeled a variety of “accidental” nuclear war. Significantly, however, it is a variety of “accident” that de-alerting could make *more* likely, rather than less.

In addition to pointing to crisis stability concerns, critics of de-alerting frequently also argue that de-alerting measures are unverifiable. This probably oversimplifies the verification

²² Conceivably, it might be the case that if the crisis-instability dangers of a de-alerting regime were deemed significant enough, one party might decide *not* to re-alert in a crisis. This would, however, potentially leave the other side, if it has itself re-alerted, in temporary possession of a monopoly on launch-ready nuclear forces even as its opponent remains in an especially

first-strike-vulnerable, de-alerted posture. It is not obvious that this would be stabilizing either.

argument, however. While some de-alerting measures that have been proposed are indeed likely not to be effectively verifiable – or at least not through any measures to which one might reasonably expect today's nuclear weapons states all to agree – others perhaps *could* be made so. (It would perhaps be one thing to position heavy objects upon the doors of terrestrial missile silos, for instance, a fact which might be verifiable by satellites hundreds of miles overhead or by ground-based inspectors in the general vicinity. It might be quite another, however, to permit outsiders on-demand access to the re-entry vehicle sections or other parts of ballistic missiles or their launch facilities in order to ensure that no warheads were present or that such systems could not, for some other reason, quickly be fired – or, with respect to submarines, not only to be sure that all nuclear weapons were and remained de-mated, but also thereafter to require that such vessels make themselves vulnerable in time of crisis by returning to port to collect warheads.) There is not space here to deal with specific verification questions. As I see it, however, the more interesting question, in any event is: even *assuming* verifiability, at what price would this verifiability have to be purchased?

This returns us to the question of crisis stability, for the verification and crisis stability issues interpenetrate. More specifically, verifiability and crisis stability actually work to some extent at cross-purposes. The visibility into one country's "re-alerting" operations that verification measures would provide – and which is indeed their whole point – is what, especially in a crisis situation, would bring alarm to its potential

strategic adversaries when such activity takes place. Seeing such steps underway, the recipient of this information would feel pressure also to begin "re-alerting" – of which, in turn, the verification regime would quickly make the already-nervous first party aware. The more informative and reliable the verification regime, the more quickly such feedback could set off destabilizing escalatory dynamics in a crisis.

Because it could also become very important which party could manage to "re-alert" more quickly, de-alerting might also set off something of a new arms race in *re-alerting* technology and procedures. (One study of de-alerting problems, for example, termed this a "regeneration race."²³) A de-alerting regime would therefore have to provide very strong assurances that no party could "game" the system by somehow securing a significant advantage in re-alert timing. Preventing attempts to secure such advantage, however, would be particularly challenging because the de-alerting regime would create powerful incentives for participants to try.²⁴

²³ Bailey & Barish, *supra*.

²⁴ In this respect, the challenge with regard to "re-alerting" is not entirely unlike one which would plague efforts to make a nuclear disarmament regime sustainable over time. The incentive for any particular country to try to retain or acquire even a small nuclear arsenal by cheating or by "breakout" from a disarmament regime would be enormous precisely *because* countries had given up their nuclear weapons. (As was dramatically shown in August 1945, it is something of a strategic coup to become the possessor of even a handful of atomic weapons in a world in which no one else has them.) This could therefore make "zero" in some sense more game-theoretically unstable than a nuclear balance at higher armament levels.

I think of this as the “Schlieffen Plan” problem, after the notorious war plan strategy of Wilhelmine Germany under which the Kaiser’s forces felt it imperative to rush to mobilize and achieve certain major wartime objectives before Tsarist Russia was able to complete its own ponderous mobilization. With the rival European powers having powerful incentives for reciprocal mobilization in order to avoid being caught unprepared, and Germany fearing that it would lose the military advantage if it waited until the larger Russian army reached full readiness, any one power’s decision to mobilize was functionally equivalent to a decision for war.

From the perspective of crisis stability, of course, the von Schlieffen example is hardly encouraging, for Germany’s perceived need to beat its potential opponents to the punch in mobilizing ground troops helped precipitate the ghastly trench warfare of World War One. In a hypothetical mid-21st-Century world of de-alerted nuclear forces, there would exist strong pressures to be able to re-alert quickly – and perhaps even some incentive, under extreme circumstances, to attempt preemptive nuclear warfighting objectives before an opponent had completed re-alerting.²⁵ One hopes that such a de-alerting system could survive crisis stressors better than did the

²⁵ Much of this incentive would come from the fear of being caught unprepared by a more rapidly re-alerting opponent. If enough of an advantage in rapidity could be gained over one’s potential adversaries, however, one country in a period of crisis might conceivably even be able – briefly, at least – to contemplate a first strike free of any worry about the other side’s potential to order launch on warning.

European alliance networks of 1914, but it is hard to have entire confidence.

To the extent that participants in such a system felt incentives to improve their “re-alert” capability, de-alerting could ignite a new phase in delivery system competition, in the form of a move toward types of system that might offer competitive advantage in returning to ready status. After all, different delivery systems might require different sorts of de-alerting, and even de-alerting steps applied uniformly might differ in their impact from one system to the next. (One example of the latter possibility would be warhead de-mating as applied to bombers as opposed to, say, ballistic missile submarines. For the former, warhead storage separate from the delivery vehicle is in a sense already commonplace, but instituting this for the latter would require heroic effort.)

It would be quite surprising, therefore, if every delivery system ended up having precisely the same degree of difficulty in *re*-alerting. Consequently, returning some delivery systems to alert status would presumably take less time – or be more reliable – than returning others. If one wished to prevent countries from “racing” to build varieties of delivery system that are quickly returnable to alert, it might even be necessary to negotiate some kind of global delivery system “freeze.”²⁶

²⁶ There is perhaps a further complication here. In order to preclude “launch-on-warning” decisions, the thrust of the de-alerting argument is to prevent the maintenance of immediately-launchable nuclear forces. Delivery systems which are inherently stealthy, slow, and recallable – *e.g.*, low-observable strategic bombers, very long-range advanced cruise missiles, exotic trans-oceanic underwater delivery vehicles, or some other unconventional

Such a global delivery “freeze,” of course, would add to the difficulty of implementing a stable de-alerting regime. Even a global agreement, however, still would not entirely solve this problem, for even (or especially) with a “frozen” mix of delivery systems, de-alerting would inherently affect different nuclear weapons powers differently. At present, they do not all rely upon the same mix of delivery systems, and some of these systems would surely be more rapidly “re-alertable” than others. If one country, for instance, relied disproportionately upon submarines, Canberra-style de-alerting might significantly affect strategic vulnerability: such vessels would need to surface and return to port in order to recover their missile warheads – thereby subjecting themselves to easy location and potential destruction, even by non-nuclear means.

delivery method capable of being command-aborted in transit – are not obviously appropriate for de-alerting and associated verification measures because they inherently would tend not to present the problem of forcing leaders to commit to visible and *de facto* irrevocable strategic decisions under the extraordinary time pressures of having received a warning of incoming ballistic missile attack.

Such systems, however, might still be considered useful for a deliberate first strike, an alarming potential choice which might actually be made somewhat more “thinkable” if the imposition of de-alerting measures upon formerly ready-alert forces made those forces more vulnerable to preemptive destruction. One might therefore argue that to ensure against such dynamics, a de-alerting regime would need to include a near-real-time global verification system providing the location and status of *all* nuclear weapons at all times. This, obviously, would be a more challenging proposition – both to persuade nuclear weapons possessors to accept and actually to implement with any degree of reliability if they did – than simply imposing *some* launch-impediment restrictions upon *some* types of delivery system.

By contrast, a country that relied instead upon mobile missiles might be less significantly affected, and might even reap some advantage vis-à-vis a submarine-dependent counterpart government if its own missile warheads could be re-mated while the mobile launchers were still deployed and dispersed in relative safety. (This disparity of impact would be especially acute, and potentially destabilizing, were it also *quicker* to return warheads to mobile missiles than to submarines – which is quite possible.) De-alerting requirements could therefore *themselves* become tools of asymmetric advantage in strategic nuclear competition.²⁷

Potentially crisis-exacerbating worries about being caught before being able to re-alert would be worsened by the fact that under a de-alerting regime – or at least under a regime based upon Canberra-style physical warhead separation – it would also probably be harder than at present for nuclear weapons states to maintain a reliable second-strike capability. One would need, for instance, to ensure not merely the survival of one’s delivery systems but also, *and separately*, the survival of de-mated warheads – *as well as* the survival and post-attack effectiveness of whatever assets one has developed and procedures one has adopted for getting these various components back together again and operational. (Failing in just one of these tasks would make the entire force useless.) De-alerted forces could

²⁷ Conceivably, one way around this would be somehow to ask that participating nuclear weapons possessors all adopt precisely the same force structure (e.g., mix of delivery systems) – with the prospects of actually *achieving* a crisis-stable de-alerting regime thus retreating even further into the unlikely future.

end up being quite vulnerable ones, further raising the verification and compliance challenges facing a de-alerting regime. In order to accept such a system, each party would have to feel *very* sure that no one else could cheat by maintaining a residual alerted strike capability, and that no nuclear weapons and missile possessor country was left out of the regime.

Not the Only Way to Skin this Cat

All this would perhaps not matter so much – and de-alerting might in fact still be the alternative least detrimental to global security – *if* it were simultaneously true that:

- (a) the danger of war triggered by launch upon receipt of false warnings is far more significant than the danger from crisis instability in a de-alerting environment; and
- (b) there exists no way besides de-alerting to reduce the risk of war triggered by accident or error.

These things, however, are *not* in fact both true. To wit, in light of the various factors discussed above, it is by no means obvious that the former is the case. As for the latter, moreover, it seems clearly to be false.

There do exist other ways to reduce accident and error problems in the U.S.-Russian strategic relationship, and potentially in other countries' nuclear deterrent relationships as well. There is, for example, one promising way on which the United States is already spending vast amounts of money and in which it has invested enormous political capital: the construction of

defensive systems capable of handling at least small numbers of incoming ballistic missiles.

These efforts are being pursued, of course, for reasons much more related to protecting against and deterring the acquisition of weapons of mass destruction (WMD) and ballistic delivery systems by rogue regimes such as North Korea and Iran than to reducing accident risks between the nuclear superpowers. Nevertheless, missile defenses would have this latter effect as well. Especially if pursued by both sides – and here one should not forget that Russia has itself had an operational anti-ballistic missile (ABM) system for decades – ballistic missile defense would tend to preclude accidental war triggered by an event such as the much-cited launch of a research rocket launch in Norway that led to a Russian nuclear alert in 1995. For the possessor of a defense system, there would be little reason to respond to such a missile launch in any way other than simply to shoot it down.

(It is surprising, by the way, that proponents of de-alerting in the international arms control community do not tend to support missile defenses. Having missile defenses *in conjunction with a de-alerting regime* would seem to provide maximal assurances against the kind of “out-of-the-blue” false alarm dangers around which the de-alerting crusade revolves. Missile defenses would also help reduce the verification-assurance demands that would be placed upon a de-alerting regime – conceivably making it more possible to imagine something akin to effective verifiability – by allowing each party to conclude that it is not necessary to have *absolute*

guarantees against another state secretly retaining a few ready-alert missiles. Without being able to depend upon defensive systems to protect against a first strike using small numbers of hitherto-concealed forces, the de-alerting verification regime would have to be essentially “perfect” in order to guard against potential “decapitation” surprise attacks.)

The United States and Russia have also worked for years to improve communications, reduce misunderstandings, and develop ways to lessen the risk of inadvertent launch or other errors in their strategic relationship. Most readers will be familiar with the Direct Communications Link (the famous “hotline”) established in 1963.²⁸ In 1971, however, Washington and Moscow also signed an agreement establishing basic procedures to increase mutual consultation and notification regarding relatively innocent but potentially alarming activities – thereby reducing the risk of accidental

nuclear war.²⁹ Since 1987, the two parties have also operated securely-linked 24-hour communications centers – the U.S. node of which is the Nuclear Risk Reduction Center (NRRC) operated by the State Department³⁰ – which specialize in transmitting such things as the notifications required under arms control treaties. Pursuant to a 1988 memorandum, NRRC transmittals, which go directly to the Russian Ministry of Defense, include ballistic missile launch notifications. This link also proved useful to help prevent strategic tensions after the terrorist assault of September 11, 2001 – at which point U.S. officials used the NRRC to reassure their Russian counterparts that the sudden American security alert in the wake of the Manhattan and Pentagon attacks was not in any way an indication of impending U.S. belligerence vis-à-vis Russia.

Nor have such efforts been limited to improved communications. For a while, in fact, the United States and Russia pursued the development of a joint reconnaissance satellite program to track potential ballistic missile launches and feed data directly to *both* governments in order to help ensure prevent errors and misunderstandings. This Russian-American Observation Satellite (RAMOS) project originated in discussions between the first President Bush and Russian President Boris Yeltsin, and led to an agreement

²⁸ See Memorandum of Understanding Between the United States of America and the Union of Soviet Socialist Republics Regarding the Establishment of a Direct Communications Link (June 20 1963), *available at* <http://www.state.gov/www/global/arms/treaties/hotline1.html>. The “hotline” was subsequently expanded and modernized. See Agreement Between the United States of America and the Union of Soviet Socialist Republics to Improve the U.S.A.-U.S.S.R. Direct Communications Link (September 30, 1971), *available at* <http://www.state.gov/www/global/arms/treaties/hotmoder.html>; Agreement Between the United States of America and the Union of Soviet Socialist Republics to Expand the U.S.-U.S.S.R. Direct Communications Link (July 17, 1984), *available at* <http://www.state.gov/www/global/arms/treaties/hotexpa.html>.

²⁹ Agreement on Measures to Reduce the Risk of Outbreak of Nuclear War between the United States of America and the Union of Soviet Socialist Republics (September 30, 1971), *available at* <http://www.state.gov/www/global/arms/treaties/accident.html>.

³⁰ See, e.g., the NRRC webpage, *at* <http://www.state.gov/t/vci/nrrc/>.

between the two governments in 1997 to create two satellites for the provision of shared warning data on ballistic missile attacks.

The RAMOS program had collapsed by 2004, but its failure seems to have been the result merely of such things as cost overruns, friction between counterpart organizations, and a failure by the two governments to prioritize the effort.³¹ The demise of the satellite project did *not* come about on account of any kind of fundamental strategic unwisdom or technical unfeasibility. If a firm commitment were made further to reduce accident risks, there would seem no reason, in principle, why something generally along such lines could not actually be implemented in the future.³²

Another effort to ameliorate some of the same accident risks that advocates of de-alerting seek to address began in 1998, with a U.S.-Russian statement pledging to share information about ballistic missile and space vehicle launches in order to “promote increased mutual confidence in the capabilities of the early warning systems of both sides.”³³ In 2000, Presidents Clinton and Putin signed a memorandum establishing a Joint Data Exchange Center (JDEC) in order to “minimize the consequences of a false missile attack warning and to

prevent the possibility of a missile launch caused by such false warning” by providing joint monitoring of ballistic missile and space vehicle launches.³⁴ Later that same year, another memorandum was signed between U.S. and Russian officials, establishing a protocol for launch notifications – including the provision of data to JDEC, eventually to include “the preparation and maintenance of a unified database for a multilateral regime for the exchange of notifications” that might at some point also include “the participation of other countries.”³⁵

President George W. Bush endorsed the JDEC concept in 2001, and he and President Putin pledged to bring into force the joint center for exchanging data from early warning systems.³⁶ Since then, however, the JDEC effort has moved neither smoothly nor quickly, being repeatedly – and, at the time of writing, *still* – held up over a myriad of frustrating issues such as disputes over how to handle legal liability matters related to U.S. contractors stationed in Russia as part of Center operations.³⁷

It is noteworthy, however, that – as with the reasons RAMOS collapsed – the things that have held up JDEC are

³¹ See Victoria Samson, “Prospects for Russian-American Missile Defense Cooperation: Lessons from RAMOS and JDEC,” *Contemporary Security Policy*, vol.23, no.3 (December 2007), at 4-8 available at <http://www.cdi.org/pdfs/SamsonLessonsFromRAMOS.pdf>.

³² A resurrection of RAMOS might also have utility in supporting joint U.S.-Russian ballistic missile defense cooperation in some form.

³³ Samson, *supra*, at 9.

³⁴ Memorandum of Understanding Between the United States of America and the Russian Federation on the Establishment of a Joint Center for the Exchange of Data from Early Warning Systems and Notifications of Missile Launches (JDEC MOA) (June 4, 2000), available at <http://www.state.gov/t/ac/trt/4799.htm>.

³⁵ Memorandum of Understanding on Notifications of Missile Launches (PLNS MOU) (December 16, 2000), at ¶ 16, available at <http://www.state.gov/t/ac/trt/4954.htm>.

³⁶ Samson, *supra*, at 12-13.

³⁷ See generally *id.* at 12-14.

not enormous, unworkable issues. They are, rather, the sort of things that the two governments presumably could work through if they really wished to do so. The liability issues for JDEC, for instance, are roughly analogous to those involved in the U.S.-Russian plutonium disposition program. Those problems were difficult, and held up the plutonium program for years, but they were ultimately resolved in 2006.³⁸ There is no reason to think the JDEC problems are insoluble, making this program a very hopeful avenue for reducing the danger of accidental nuclear war between the United States and Russia. Moreover JDEC – and RAMOS, for that matter, for there seems to be no reason why the satellite program could not be revived if desired – conspicuously possesses one advantage as a risk-reduction effort that no de-alerting proposal enjoys: it *already* has the support, in principle at least, of the United States and Russia.

Conclusion

In light of these various considerations, therefore, de-alerting proposals lose most of whatever superficial appeal they might enjoy at first glance. To sum up:

- It is *not* true that current forces are bound to destabilizing “hair-trigger” launch assumptions, though for deterrent purposes U.S. and Russian forces likely both go to considerable trouble to maintain the *option* of launching at least *some* forces immediately. Rather, nuclear force postures aim to provide national leaders with as much information and decision-making time – and therefore flexibility – as possible in all circumstances. This includes also trying to ensure the option of riding out an attack while retaining a credible second-strike retaliatory force, which is quite the *opposite* of a launch-on-warning posture.
- While it might indeed reduce the risk of some types of accidental nuclear war under some circumstances, de-alerting could exact considerable costs in terms of crisis instability by forcing leaders into actions that would be seen as threatening to the other side (e.g., re-alerting) earlier in a crisis than would otherwise have been the case. This increased risk of nuclear escalation in times of tension must be balanced against whatever gains de-alerting might otherwise offer in reducing accident risks.
- By placing an enormous premium upon the capability rapidly to *re-alert* – and by affecting different strategic systems differently in terms of

³⁸ See “Signing of US-Russian Plutonium Disposition Liability Protocol,” statement of U.S. State Department spokesman Sean McCormack (September 15, 2006), *available at* <http://www.state.gov/r/pa/prs/ps/2006/72291.htm>; *see also generally* Stimson Center, *Plutonium Disposition* (undated issue briefing), *available at* <http://www.stimson.org/cnp/?SN=CT200705231272#end16>. For an account of the liability disputes that plagued the plutonium program, and cooperative programs in Russia more generally, *see* Amb. Michael Guhin, testimony before the Strategic Forces Subcommittee of the House Armed Services Committee (July 26, 2006), *available at* http://www.globalsecurity.org/wmd/library/congress/2006_h/060726-guhin.pdf; Stimson Center, “Liability Issues in Cooperative Nonproliferation Programs in Russia” (undated issue briefing), *available at* <http://216.197.111.238/print.cfm?SN=CT200706011307>.

anticipated reconstitution time – de-alerting measures could *themselves* affect the strategic balance between participating countries, with perhaps destabilizing consequences. A de-alerting regime might also encourage a new arms race in re-alerting technology or in the construction of systems more easily returnable to ready alert status.

- De-alerting is not the only way to reduce accident risks. Unlike de-alerting measures – which are opposed by the main nuclear powers – the United States and Russia, for instance, have *already* agreed in principle to transparency and confidence-building measures (e.g., JDEC) designed to ameliorate some of the very accident and error risks that advocates of de-alerting seek to address. Moreover, proposals such as JDEC would *not* entail the crisis stability costs that would be imposed

by de-alerting measures such as the physical warhead separation recommended by the Canberra Commission. (Indeed, something like JDEC might be very *valuable* as a transparency and confidence-building measure in time of crisis.)

If they wish ever to persuade weapons-possessors to accept some kind of de-alerting regime, advocates of such an approach need do a much better job of addressing the worrisome crisis stability concerns I have outlined. On the basis of the arguments made to date – and in light of the availability of already-agreed but as yet untried risk-reduction approaches that would *not* impose crisis-stability costs – the careful observer should be forgiven for concluding that de-alerting is, on balance, *not* the best approach available, and that it might in fact end up being more dangerous than helpful.

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