As the Soviet Union was collapsing, an American research team visited Moscow to interview military leaders as part of a study for the U.S. Department of Defense Office of Net Assessment. One of the interview subjects was Marshal Sergei Akhromeev, Chief of the General Staff and Personal Advisor to Gorbachev, who provided insights into Soviet nuclear planning—this included clarification on issues that were previously misinterpreted by U.S. military planners, such as, “At no time did the USSR ever intend to make first use of nuclear weapons.”

In addition, Akhromeev commented on a specific tool for reducing the tensions and risks that defined U.S.-Soviet dynamics for most of the Cold War: initially, he was “very distrustful of U.S. intentions until he had the opportunity actually to meet his American counterparts on the U.S. Joint Chiefs of Staff in 1988…. The mutual understanding that came from face-to-face discussions helped to create a fairly stable situation in Europe.”

Since the end of the Cold War, the need for nuclear risk reduction has never been greater, but the tools for nuclear risk reduction have never been so wanting. To be sure, the nature of strategic stability and nuclear risks has changed since Akhromeev’s interview. Emerging technologies such as hypersonic glide vehicles (HGVs) and cyber increase the speed of conflict and, potentially, escalation, increasing the risk of miscalculation and reducing decision-making time. Also unlike the Cold War, tensions are focused on regional conflicts in Eastern Europe and limited war scenarios. In these tense regional situations, perceptions of stability in Washington and Moscow are not always aligned and changes in military doctrine increase risks of misperception and instability. (For the purposes of this discussion, strategic instability includes the risk of an arms race or crisis escalation.) Amidst these technological and geopolitical developments, the influence of arms control as a tool for strategic stability is waning. There are no prospects for a follow-on to the 2010 New START Treaty and the status of the 1987 Intermediate-range Nuclear Forces (INF) Treaty remains in limbo, with both the United States and Russia accusing the other of non-compliance.

And yet, Akhromeev’s observations offer an initial two-tiered framework of long- and short-term options for avoiding instability in U.S.-Russia relations at one of the tensest points since the end of the Cold War. First, traditional forms and forums of arms control, typified by the 1986 Reagan-Gorbachev talks in Reykjavik, suggest opportunities for increasing transparency and predictability, but come with challenges such as resolving disputes over INF. Second, while embarking on the time-consuming and arduous work of trust-building for long-term arms control solutions, nuclear risk reduction is an imperative. Indeed, we must return to focusing on reducing the risk of

2 Ibid.
nuclear war. Many of these risks, particularly crisis escalation, are associated with miscommunication and miscalculation, which involve inherently “human factors.” Therefore, the role of individuals, personalities, and the face-to-face interactions described by Akhromeev require greater attention than is often afforded in many studies on stability and instability.

This paper will identify tools for avoiding instability and miscalculation particularly in the event of a crisis for the United States and Russia. It will begin with an overview of how arms control contributes to strategic stability and the importance of trust and confidence in arms control. It then presents options for both traditional arms control and more informal confidence-building measures (CBMs) over the short-, medium-, and long-terms so as to reduce instability. The analysis includes the “human factor” and potential utility of non-traditional channels of communication, to include text messaging and Twitter. This is not to diminish the importance of technical tools, therefore this toolkit includes traditional pathways, such as treaty-based arms control with built-in CBMs. Ultimately, it concludes that conditions do not currently exist for traditional arms control until INF disputes are resolved; however, the United States and Russia can lay the groundwork for further arms control if and when geopolitical conditions improve while simultaneously reducing nuclear risks through CBMs. Of all the tools suggested, the most beneficial in the short-term include increasing dialogue on scenarios of crisis escalation and a joint statement committing to risk reduction, and building an arms control community of practice over the long-term.

**Trust versus Confidence in Strategic Stability**

Traditional objectives of arms control include strengthening strategic stability, reducing the risks of conflict, reducing the damage if conflict occurs, and reducing defense costs. These objectives are often portrayed as being security-focused, whereby they are rooted in states’ interests in avoiding conflict, which can include a balance of forces locked into arms control treaties. Two components of strategic stability include arms race stability, whereby states are not incentivized to build up their capabilities vis-à-vis a potential adversary, and crisis stability, whereby neither side is likely to escalate a conflict in the event of a dispute.

At least two important caveats must accompany any discussion of arms control. First, arms control does not equal disarmament. Rather, arms control is about the management of existing and future weapons and the stereotype of “deep cuts” can limit the potential gains from arms control. Second, arms control is typically the art of the possible. Limitations on prospects for arms control exist not only at the geopolitical level but also domestically. Indeed, history suggests that domestic pressures on arms control are often the more challenging ones, such as ratifying the Comprehensive Test Ban Treaty for the United States. One reason for this is that arms control requires vulnerability and limitation of forces, which are often unappealing to domestic audiences and policy-makers. Engaging in dialogue may even be perceived as weakness in some cases.

Trust is unavoidable in arms control because states are taking on at least three risks. First, states accept the risk that an arms control partner will use verification activities

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for more nefarious purposes such as espionage. Indeed, data provided in arms control inspections and information exchanges is often so secretive that it is not widely shared throughout the home government and military. For example, during START negotiations, Soviet military officials often requested their American counterparts refrain from detailed discussions because much of the material remained classified from Soviet Ministry of Foreign Affairs officials. Second, there is the risk that an adversary will cheat in arms control so as to achieve a strategic gain. One example of this was the 1972 Anti-Ballistic Missile Treaty, which the Soviets knowingly violated with a site in Krasnoyarsk. Finally, in committing itself to arms control, a state is also trusting itself to abide by the terms of the agreement and to accept limitations on its capabilities for the duration of the treaty. For example, the United States withdrew from the ABM Treaty in 2002 when it was no longer willing to accept the risks of limiting its missile defenses. The self-trust required in arms control is particularly important when considering the influence of domestic factors. So why would states accept these risks? Why does trust matter in discussions of arms control and strategic stability?

States will trust when it is in their national interest. Trust can be defined as the expectation of favorable behavior in a mutually vulnerable and reciprocal relationship. Trust is an action taken on faith in the face of an uncertain future. As such, trust entails some degree of vulnerability, whereby a trusting party is accepting a risk which it would otherwise prefer not to accept. But these risks are considered acceptable only because trust is reciprocal, wherein both partners are taking on an otherwise undesirable risk but do so because of the potential payoff of cooperation, such as transparency and improving strategic stability. Confidence, on the other hand, differs from trust in that it does not typically entail vulnerability and it can include unilateral measures to increase transparency. CBMs are therefore often easier to achieve and negotiate than legally-binding agreements such as arms control that come with greater risks and are more deeply embedded in domestic politics.

Experts define trust in different ways based on its depth and breadth: is trust a calculation or gut instinct? Can trust in one area, such as arms control, transfer to other domains, such as human rights? And are some states simply more trustworthy than others? One argument is that trust is generalized, wherein actors trust each other based on the integrity of their character and some states are simply more trusting and trustworthy than others. In this type of trust, tools such as verification or punishment of non-compliance are unnecessary. Others argue trust requires experience with a partner and knowledge about that partner’s interests and behaviors over time. A final perspective on trust worth considering is the importance of the “human factor”- states often send signals about their trustworthiness or interest in trusting relationships, but these can be missed. Building trust requires having the “right people” in place to both

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7 See, for example, Andrew H. Kydd, Trust and Mistrust in International Relations (Princeton: Princeton University Press, 2005).
read and send those signals. A common example of this is Gorbachev, who is portrayed as a “game-changer” in signalling an interest in arms control to his American counterpart.  

While traditional forms of arms control would seem to be at an impasse, it has nonetheless proven to be a valuable tool for strengthening strategic stability, reducing nuclear risks, and promoting transparency. Therefore, in developing a toolkit for avoiding instability, past examples of arms control offer lessons learned to inform future opportunities. Two such lessons are examined here to inform stability-building tools: de-linkage and “trust champions.” Turning to the first lesson learned, during the Strategic Arms Limitation Talks (SALT) in the late-1960’s and early-1970’s, U.S. Secretary of State Henry Kissinger planned to use the negotiations as an opportunity to both limit developments of offensive and defensive capabilities, and to limit Soviet advances in the Third World, such as Angola. Ultimately, however, arms control was only possible by stripping away these points of linkage to isolate the areas of common interest where trust was possible. A similar dynamic is observable for START: arms control talks in the 1970’s and 1980’s treated strategic offensive weapons, intermediate-range missiles, and missile defenses as a portfolio of issues. It was only in 1987 when Gorbachev decided to “untie the package” that arms control became possible by treating INF separately because he prioritized limits on Pershing IIs.

A second lesson learned from historical case studies of arms control is the role of individuals not only in building personal relationships, but also as advocates for arms control and building domestic consensus. I refer to these individuals as “trust champions.” The arrival of Gorbachev has been highlighted elsewhere, but his American counterpart, Reagan, is also an example of a “trust champion”. Although START was ultimately concluded, signed, and ratified under Reagan’s successor, George H.W. Bush, Reagan invested significant amounts of political capital and time to build consensus with American politicians to support arms control, including the INF Treaty. This included sharing his vision for arms control and educating other policymakers, particularly in Congress: there were 40 White House meetings on the topic of arms control in as many weeks, 14 of which Reagan himself presided over.

While these lessons learned can help to inform tools for increasing strategic stability, the new strategic environment also calls for redefining the objectives of arms control. The emphasis of arms control must remain on the ultimate goal of preventing nuclear use. Rather than focusing solely on the strategic benefits of arms control, the new objectives of arms control can include risk reduction, promoting nuclear responsibility, and promoting dialogue and transparency-building measures. These new objectives are more explicitly aligned with the ethical objectives of arms control, but also reflect the increasingly complex nature of conflict, arms races, and crisis management. Arguably, some nuclear actors are willing to accept higher levels of risk- but responsible nuclear actors have a security-driven and moral duty to set an arms control agenda that reduces those risks. An additional benefit to such an approach will be responding to pressure from the nuclear ban treaty and within the

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9 Ibid.
Nuclear Non-Proliferation Treaty (NPT) on nuclear weapon possessors to reduce nuclear risks.  

Table 1, *Arms Control and CBMs Toolkit*, offers options based on historical experiences that strengthen strategic stability through (1) traditional arms control mechanisms and trust-building, and (2) more contemporary CBM options focused on communication channels, crisis communication, and risk reduction. These are treated as short-, medium-, and long-term options and discussed below in greater detail.

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*Table 1, Arms Control and CBMs Toolkit*

**Stability through Arms Control**
Legally-binding bilateral strategic arms control, such as START and New START, have traditionally contributed to strategic stability by fostering predictability and transparency in U.S.-Russia relations. This has contributed to arms race stability by placing qualitative and/or quantitative limitations on a certain category of weapons. It has also contributed to crisis stability by reducing the incentives for first strike, whereby both sides are aware of the others’ capabilities and know the risks of escalation. More indirectly, arms control has contributed to strategic stability by providing a forum for dialogue and conflict resolution, along with fostering transparency through verification and the face-to-face contacts between diplomats and military officials, as mentioned by Akhromeev. But arms control is approaching a tipping point where it will either have to adapt to a new format or become obsolete.

Continuing with arms control “as we know it” will require overcoming significant hurdles, particularly the current climate of distrust between the United States and Russia. From the American perspective, the next round of reductions must include tactical nuclear weapons (TNW), and Russia must return to full and verifiable compliance with the INF Treaty. From the Russian perspective, American missile defenses and advanced conventional weapons, including HGVs, undermine strategic stability and the offense-defense balance. Russia typically requests that further arms control must be multilateral or include American TNW in Europe. And increasingly Russia similarly insists on verification that the United States is in full compliance with the INF Treaty given allegations that drones and missile defense interceptors could be converted to cruise missile capabilities. Attempts at further strategic arms control, such as Obama’s suggestion for reciprocal one-third reductions, have failed to gain traction.

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An historical challenge for arms control has been differing definitions of strategic stability for the United States and Russia.\(^\text{13}\) For the United States, “strategic stability” is typically defined as survivable second strike, whereby neither side has incentive to attack first in a nuclear conflict because of assured retaliation. In terms of capabilities and arms control, this translates into the need for parity in arsenal numbers and verification. For Russia, however, strategic stability has always involved a broader definition and interpretation of the offense-defense balance. These different definitions thus far have been managed through ambiguous treaty language but can no longer be readily ignored. While the two sides may never reach a common shared definition of strategic stability, exploring these disparities in interpretation is a crucial step for both arms control and more informal CBMs.

In addition to technical challenges, both countries face domestic opposition to further treaty-based arms control agreements that require consent by the U.S. Senate and the Russian Duma. For the United States, until alleged Russian non-compliance with the INF Treaty is resolved, Senate support for further treaty-based arms control in the near-future will be lacking. Additional issues of contention will include continued Russian aggression and military presence in Ukraine given a strong Eastern European lobby in Washington and the perception that Russia’s geopolitical ambitions include revising European borders and undermining European security institutions, such as NATO. For Russia, nuclear weapons remain a source of prestige and the “sacred cow” of the Russian military.\(^\text{14}\) Any additional limitations will be met with staunch opposition by nationalists and hardliners in Moscow, therefore convincing these arms control skeptics and Putin will require careful messaging and communicating American interests and intentions.

Reducing the risk of an arms race requires restoring the INF Treaty. Returning to a credible INF Treaty is a mid-term goal, but strategic stability talks are a readily available short-term goal that will also contribute to this effort. These discussions will not only strengthen the INF Treaty and broader arms control regime, but will also provide an opportunity to increase transparency of one another’s intentions in the increasingly volatile region of Eastern Europe. Other experts have suggested utilizing the Special Verification Commission (SVC) to discuss technical issues of compliance\(^\text{15}\), which met in 2016 for the first time since 2003. But alternative forums may present an opportunity for discussing INF compliance and broader questions on the role of arms control and competing definitions of strategic stability so as to increase transparency. These include the NPT “P5 talks” or the New START Bilateral Consultative Commission (BCC).

In terms of long-term prospects for arms control, the lessons of de-linkage are evidence that future agreements may have to sacrifice ambition in scope for stability in practice. One set of options for further arms control would include a New START follow-on, extending New START, or a new treaty that limits aggregate numbers of

\(^\text{13}\) See, for example, Alexei Arbatov, “The Hidden Side of the U.S.-Russian Strategic Confrontation”, *Arms Control Today*, September 2016.


warheads, to include both strategic and tactical, or somehow incorporating conventional weapons.

Another set of options is more unconventional in nature. Asymmetric arms control\(^{16}\) would respond to the changing strategic environment defined by asymmetries across domains. Typically arms control has been envisioned as like-for-like limitations, such as a shared agreement to limited operationally-deployed strategic warheads to 1550. But if strategic stability is no longer just about the balance of nuclear forces and must incorporate new and emerging technologies, then neither is arms control. One example of such a trade-off might be for the United States to offer Russia a legally-binding guarantee that it would not expand beyond its current plans for missile defense in Europe for ten years. This would include verification of missile defenses to assure Russia that the Mark 41 vertical launch system is not a violation of the INF Treaty. In exchange, Russia would reduce its deployed tactical nuclear weapons down to 200\(^{17}\), also for a ten-year duration, to include verification that warheads remain in storage. This example is fraught with technical and political challenges, but is offered here merely as an example of asymmetric arms control.

Given present geopolitical tensions, the potential for traditional arms control to contribute to strategic stability and crisis management is limited. Rather than force or abandon arms control, however, both the United States and Russia can instead lay the groundwork for arms control opportunities as they present themselves and simultaneously focus on nuclear risk reduction and avoiding miscommunication, particularly in crises.

Confidence-Building through Communication

The stereotype of crisis communications is a red phone in the White House or Kremlin. While this continues to be a valuable tool and has expanded to other national capitals, CBMs to avoid instability and crisis escalation require updating to reflect changes in geopolitics, military capabilities, and modes of communication. Academic research points to the importance of individuals in trust- and confidence-building, particularly Nicholas Wheeler’s suggestion of “security dilemma sensibility”, defined as, “an actor’s intention and capacity to perceive the motives behind, and to show responsiveness towards, the potential complexity of the military intentions of others.”\(^{18}\) Similarly, a common observation of studies on increasing instability in U.S.-Russia relations and rising nuclear risks is the lack of expertise on nuclear issues.\(^{19}\) Therefore, CBMs must take into account not only the red phone, but also the person answering it.

In the short-term, this includes the need to increase dialogue, improve transparency, and build personal connections. One means of doing this is to take advantage of existing forums to establish communication channels. These include the “P5 process” in the NPT and NST BCC. Also, as previously mentioned, the ongoing strategic

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\(^{17}\) Russia may have up to 4000 non-strategic nuclear warheads, 2000 of which may be active and assigned to delivery vehicles. See Amy Woolf, “Nonstrategic Nuclear Weapons”, \textit{Congressional Research Service}, March 23, 2016.

\(^{18}\) ibid.

\(^{19}\) See, for example, Chivvis et. al.
stability dialogues are a timely opportunity not only for addressing substantive issues and differences in perception of stability, but also for building personal contacts. Communication between individuals in the time of a crisis need not be limited to an official hotline, either. More informal channels of communication, such as texting, are also valuable if personal relationships exist. An area that requires further study is the role of social media during such times and between officials. Twitter is typically associated with provocative messages by U.S. President Donald Trump, but it could equally provide a platform for instantaneous communication in the event of a crisis and be a tool for signalling so as to reduce tensions, provide real-time information, and reduce tensions.

Another option would be for the United States and Russia to agree on a third-party arbiter to be notified in the event of a crisis to act as a liaison by acquiring information, communication with both sides, offering assurances, and working to reduce misperceptions. For example, had there been an arbiter during the Able Archer crisis, the Soviet Union could have contacted him/her, who would subsequently reach out to NATO members to resolve misinterpretation by both sides and communicate as an objective observer. Such an individual could be the United Nations Secretary General, a sitting diplomat in a neutral third party country, or a retired diplomat, such as Angela Kane, former UN High Representative for Disarmament Affairs. It would be essential to pre-designate that person before tensions escalate.

An additional short-term option is a Joint Statement by the United States and Russia, similar to the 1990 Soviet Union-United States Joint Statement on Future Negotiations on Nuclear and Space Arms and Further Enhancing Strategic Stability. While this statement focused on intentions for legally-binding arms control, it also included a commitment to CBMs:

>> The sides will pursue additional measures to build confidence and ensure predictability of the military activities of the United States of America and the Union of Soviet Socialist Republics that would reduce the possibility of an outbreak of nuclear war as a result of accident, miscalculation, terrorism, or unexpected technological breakthrough, and would prevent possible incidents between them. 20

Such a statement could be made by the P5 in the context of the NPT, or bilaterally by the United States and Russia to express a commitment to reducing nuclear risks. The 1990 language offers a readily available and still applicable template.

In the mid-term, a priority should be re-establishing military-military dialogue between the United States and Russia specifically to discuss scenarios of escalation and reduce misperceptions. While Russia insists its 2014 Military Doctrine is not intended to increase the risks of escalation, it is perceived as lowering the nuclear threshold by U.S. experts and policymakers. Conversely, the United States insists its missile defenses deployed in Eastern Europe are not targeted at Russia. Yet Moscow continues to perceive them as a threat to Russian strategic forces and therefore undermining strategic stability. What matters is the perception of both sides, which would inevitably inform decision-making in a time of crisis, and reducing the risks of misperception requires improved dialogue and opportunities for clarification.

In the long-term, given the importance of individuals in times of crisis, personal relationships and experiences would seem to be a crucial ingredient for nuclear risk reduction. Building such a community of practice requires investment in the next generation of arms control practitioners in America and Russia through education programs, workshops, exchanges, and professional development. One example of a community-building activity would be an arms control workshop with mid-career American and Russian non-governmental experts over two days to include negotiation simulations, lessons learned from senior practitioners, technical training, and panel discussions to present new research in both countries on the topic. An indirect benefit, of course, would also be fostering face-to-face exchanges and building personal relationships as discussed earlier. This community of practice will require investments of time, resources, and coordination by both American and Russian governments.

In placing increased emphasis on the “human factor” of crisis management and communication, this paper did not intend to diminish the importance of technical factors, but rather was meant to explore in more detail opportunities for individuals to contribute to nuclear risk reduction. Strengthening strategic stability is no longer optional but rather is a security requirement for both the United States and Russia given heightened nuclear risks. These include not only the changing nature of warfare due to new technologies that blur steps on the escalation ladder, but also the changing nature of communication and signalling. Numerous questions remain as to whether or not the tools suggested here can contribute to slowing down escalation or reducing miscalculation in a crisis, and inevitably they will entail significant challenges at the domestic level. In addition to these security benefits of CBMs, however, risk reduction is also an ethical responsibility for the United States and Russia as stewards of the largest nuclear arsenals on the planet. To quote the British nuclear ethicist Michael Quinlan, tools such as arms control can contribute to the shared goal of avoiding nuclear use, because relying solely on deterrence is “plainly unacceptable.”

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