

Proposition One:

**Nuclear weapons are too destructive to be practical instruments of security.** Some people reached this conclusion entirely on the basis of Hiroshima and Nagasaki, not least the Hibakusha. For others, it was the radiation spread by atmospheric nuclear testing that brought the point home. Yet others, were brought to their senses by the absurd accumulation of nuclear weaponry during the Cold War, captured in the word “overkill” and the phrase “bouncing the rubble”. Today, and indeed since before the turn of the millennium, there are still those who hold out against this conclusion, despite the warning from climatologists and agriculturalists that even a limited nuclear exchange would have devastating global impact. So, what would it take to convince them? A bomb that could split the world in half?!

Proposition Two:

**Nuclear destruction is nonlinear.** Deterrence theory is only coherent (setting aside moral judgment here) when there is a linear relationship between “tit” and “tat”. Even in the most basic nuclear deterrence formulation, Mutually Assured Destruction, tit-for-tat is a delusion. Adversary A attacks, triggering firestorms in x number of cities: millions of people die in country B; Adversary B counterattacks, triggering firestorms in x number of cities, billions of people die worldwide. Does the former’s culpability, exonerate the latter’s actions? No. The linear theory is MAD: the non-linear reality is GAD, globally assured destruction.

Proposition Three:

**Nuclear deterrence has a profound credibility problem.** Credibility is considered a key pillar of deterrence, but is it credible that B, having failed to deter A, would punish the entire world just to gain eye-for-eye vengeance on A? Or put another way, would B seriously jeopardize the capacity of the world to come to its aid just to gain vengeance? Or simply to “uphold” the theoretical construct of deterrence? It has always been a weakness of nuclear deterrence that once deterrence has failed – when it never ought to have – what is the point of continuing to follow its dictates (i.e. retaliate)? At the destructive level we are cognizant of today, it is clear that, on the contrary, there is vital NOT to follow deterrence’s dictates.

Proposition Four:

**There are, thus, two brinks on the way into the abyss.** We are all well versed in the first brink: “first use”, the escalation to nuclear warfare. By definition, this is subject to single state action. The second brink occurs when the regional, collective use of nuclear weapons exceeds the linear realm and the nonlinear impact becomes global. Do current nuclear weapon second-use policies act to avoid this second brink? No. What policies might?

Proposition Five:

**Deterrence is inherently unstable.** If nuclear warfare breaks out at any level below the nuclear famine threshold, it will rapidly escalate up to that threshold. Regardless of who initiated nuclear escalation, it is in the “interest” of each adversary to ensure that it is not the one put in the position of having to restrain its retaliation because it would push the world into the abyss. That is, each will want to grab the lion’s share of the sub-threshold, collective-use pie, thereby minimizing the adversary’s share; it really is a zero-sum game. But, obviously, a spiral of escalation could easily shoot right past the threshold. So it might seem that the “decisive” action would be to jump straight to the threshold, leaving ones adversary in no doubt what the consequences of further escalation would be. So we see, under prevailing circumstances, there is a very steep, slippery slope toward the second brink. (Making no first use all the more important.)

Proposition Six:

**We are in a brave new world.** (And not only because of the Corona Virus.) Before, the hope was that if we could just continue to have reasonable leadership, deterrence could provide temporary stability, while we forged the institutions of a robust nuclear weapon free world (NFWF). So what can we do? Shut our eyes tightly and hope that no one will notice or point out that deterrence as we have known it is in tatters? If every country in the world had a no-first-use policy (NFU), that just might, barely, work. Why? Because, if everyone has nuclear

weapons only because others have them, then why not just get rid of them completely? If only we can avoid nuclear war long enough to get the job done.

Proposition Seven:

**Escalation dominance is a trap.** As long as adversaries vie for dominance, there is the temptation to throw nuclear weapons into mix. Even the formulation “last resort” rests upon the notion that nuclear weapon use can restore dominance, or at least parity. “Last” resort is particularly pernicious, because it leads countries to short change “penultimate” resorts. The flip-side of the previous point is that one is unlikely to be willing to eliminate ones nuclear arsenal, as long as one relies upon nuclear weapons to counter conventional threats. The spirit of dominance is the driving force of all arms races; the opposite direction to which we so desperately need to go.

Proposition Eight:

**NFU is not a physical barrier to use.** This criticism of NFU is not entirely fair, but at heart it is correct. Unfair because NFU can and should go far beyond declaratory policy; correct because all such concrete measures can be undone. NFU is not stable against large perturbations – to use systems language. I have called it the low pass between the Valley of the Shadow of Death and the Promised Land. What is that, if not a saddle point. This instability is particularly acute if not all nuclear-armed states adopt NFU. What can be done to shore up NFU until we are ready to descend into the Promised Land of a NFWF?

Proposition Nine:

**NFU seems to legitimate second use, thereby putting us on course for the second brink.** This criticism of NFU is not entirely fair, but is not entirely incorrect either. The belief that adoption of the NFU will reduce the likelihood of nuclear weapon use significantly is not fanciful, even if all countries do not adopt it. But it cannot in itself banish the possibility of use and the inevitable follow-on question: what next? Micheal Krepon has said, “All bets are off.”; India has said, “Massive retaliation.” Clearly, in light of the preceding, these are unsatisfactory answers.

Proposition Ten:

**Never Escalate; take every opportunity to deescalate.** When every escalation carries within it the seed of further escalation, with the destruction of civilization the ultimate outcome, what possible sense does escalation dominance make? If the primary objective of nuclear deterrence was (but can be no longer be) to instill caution in the nuclear powers, then why not simply put caution center stage: no matter how the adversary may escalate, ones response must be deescalation. When a tit-for-tat response would have global impact, it must be eschewed.

Proposition Eleven:

**How does one clearly signal a determination to never escalate?** Forget the “balance” of terror. States should disavow cities as nuclear targets – never under ANY circumstance escalate to incinerating cities (or other concentrations of flammable materials). This is the main source of the non-linearity highlighted earlier. While at it, states should disavow all types of explosions (ground bursts, submarine detonations, and earth penetrators) which would generate inordinate amounts of radioactive materials near populated areas and agricultural lands. Likewise, states should disavow nuclear EMP attacks and other massive attacks on infrastructure (definitely include NPPs). The bottom line: take seriously the admonition of the ICJ that nuclear weapons cannot, generally, be used in a manner compatible with international law. Instead, focus on conventional defenses and multilateral restraints.

Proposition Twelve:

**Work double-time for a NFWF.** A NFWF is doable, but this is hard to see in a world dominated by nuclear terror. Why put effort into creating the global institutions to oversee a NFWF if its prospects seem so remote? Get serious about ending the terror, and suddenly the prospects no longer seem so remote. Indeed, they become the order of the day; the Promised Land awaits us. Otherwise, every additional delay is an invitation to backsliding – into the Valley of the Shadow of Death.

[please send comments to aaron.tovish@gmail.com]