***The Urgent Case for US Hypersonic Weapons Systems and a new Global Arms Race***

***One Pager***

*(First written 06/14/2021)*

BLUF:

* **A hypersonic arms race, averted in the 1970s by the US abandoning promising systems, was restarted by Russia in the mid-2010s by unveiling a new family of hypersonic weapon systems (HSWS).** The Chinese followed shortly thereafter with a Hypersonic Glide Vehicle (HGV) and a family of missiles.
* The American decision **averted a reduction in already short (est. 6 minute) response times to minutes if not seconds, which would** **increase the risk of accidental nuclear confrontation in an era where systems were notoriously unreliable.**
  + HSWS would reduce response times, increasing the risk of a nuclear miscalculation, many of which were averted during the Cold War.
  + Hypersonic cruise or ballistic missiles launched near US shores could hit targets within minutes.
  + If effectively employed at scale such a strike could largely if not wholly negate an American response.
  + Notably, **the maneuverable HSWSs being fielded by Russia and China would significantly reduce interception rates.**
    - **Ballistic missile interception rates are at a conservative 50%; this is decreased with the use of Multiple Independent Re-entry Vehicles (MIRVs). HSWSs further reduce this figure due to the possible use of favorable angles of approach and the evasion of interceptors. Hypersonic MIRVs deployed via HSWSs would likely lead to single digit interception rates.**
* **Significant Chinese and Russian developments** **in** Anti-Submarine Warfare **(ASW)** and Intelligence, Surveillance, and Reconnaissance **(ISR)** **capabilities** **increase the risk of a nuclear first strike and largely if not wholly negate an American second-strike** delivered by SSBNs.
* Chinese HSWSs, specifically the DF-17 and DF21/6D anti-ship ballistic missiles, are able to strike American vessels within nearly all Island Chains if Chinese ISR can withstand American countermeasures in the short to mid-term after a conflict erupts.
* The **developments are especially worrying due to Dr. Graham T. Allison’s conclusion** in **“*The Future of War”,* that the key development in every major war has been the crossing of a political red-line that had not been crossed before.**
  + **In the 21st century, it is feared this political red-line will be the use of Nuclear weapons.**
* **The nuclear triad and the threat of an American second-strike are pillars of American strategic doctrine and the deterrence which underpins it.**
* **Thus, the proliferation of Chinese and Russian HSWSs significantly degrades US strategic deterrence. American HSWSs and new methods for their effective employment are critical for its return, and in turn, a decrease in the likelihood of a nuclear first strike.**