MEMORANDUM FOR THE CHAIRMAN, DEFENSE SCIENCE BOARD

SUBJECT: Terms of Reference – Defense Science Board 2020 Summer Study on New Dimensions of Conflict

For millennia, the most common means of imposing political will has been the threat or application of military force. In more recent times, states have employed other means to impose their political will. For example, cyber espionage and cyber attacks have become commonplace. In addition, states have used proxies (terrorist organizations, organized crime), resources (oil, natural gas), “foreign aid,” infrastructure, and private industries to further their interests, in many instances, counter to those of the United States and its allies.

Many in the United States’ political leadership were surprised by the coordination and sophistication of these new “attacks.” As a consequence, the United States and its allies were unable to develop effective strategies and doctrine for “combat” in these new dimensions of conflict, and they have since been working to counter these new tactics.

Considering this recent evolution of statecraft, it is logical to assume that as technology advances, as the world climatically and geographically changes, and as states become richer or poorer and younger or older, that new dimensions of conflict will arise that present both new opportunities and new vulnerabilities. These new dimensions might include technology/intellectual property, biology (gene editing, manipulation of higher organisms), international law (“lawfare,” international standards), influence/coercion (artificial intelligence, deepfakes), population (demographics, ethics, national identity), and academic/higher-education (Thousand Talents Program). It is also anticipated that a rapidly changing world will give rise to new opportunities and vulnerabilities in the existing warfare dimensions of land, sea, air, space, and information.

To avoid future surprises, I am tasking the Defense Science Board (DSB) to consider future dimensions of conflict that might be exploited by our near-peer competitors, Russia and China, and adversaries to impose their will on other states. The DSB should consider any new dimension wherein our strategic competitors or adversaries have both the intent and potential capability to operate and exert influence counter to U.S. interests. For each potential new dimension identified by the DSB, the DSB should recommend early-warning indicators that should be monitored to provide the longest possible lead time to develop countermeasures, new strategies, and doctrine.

Critical to this effort will be an assessment of how the Department’s R&E priorities align against these future dimensions. Therefore, I am tasking the DSB to work closely with the Modernization Directorate, and all supporting Assistant Directors, in the creation of this study. I expect a range of recommendations on how best to posture the Department to foster the brand of
foresight and innovation require to go beyond merely recognizing new dimensions of conflict, and instead, be the drivers of new dimensions of conflict.

In addition, the DSB should recommend inoculating actions the United States might take, employing all the powers of state, if necessary, and provide lead times for those actions.

This summer study will be sponsored by me as the Under Secretary of Defense for Research and Engineering (USD(R&E)). The study members are granted access to those Department of Defense (DoD) officials and data necessary for the appropriate conduct of their study. As such, the Office of the Secretary of Defense and Component Heads are requested to cooperate and promptly facilitate requests by DSB staff regarding access to relevant personnel and information deemed necessary, as directed by paragraphs 5.1.8 and 5.3.4 of DoD Instruction 5105.04, “Department of Defense Federal Advisory Committee Management Program,” and in conformance with applicable security classifications. The USD(R&E) will serve as the DoD decision-maker for the matter under consideration and will coordinate decision-making as appropriate with other stakeholders identified by the study’s findings and recommendations.

The DSB will operate in accordance with the provisions of the Federal Advisory Committee Act (5 United States Code (U.S.C.), Appendix); Deputy Secretary of Defense memorandum, “Advisory Committee Management,” dated November 26, 2018; and DoD Instruction 5105.04, “DoD Federal Advisory Committee Management Program.” Individual DSB members do not have the authority to make decisions or recommendation on behalf of the DSB nor report directly to any Federal representative. It is not anticipated that this study will need to go into any “particular matters” within the meaning of title 18 U.S.C., section 208, nor will it cause any member to be placed in the position of action as a procurement official.

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