Deterring Complex Threats: The Effects of Asymmetry, Interdependence, and Multi-polarity on International Strategy

Project Abstract

Deterrence as a strategy and doctrine was convincingly and effectively deployed by the United States during the Cold War. Today, however, states face a widening range of destabilizing threats, in particular to space, cyberspace, financial, and other critical infrastructure. The interconnectedness of the contemporary world creates many new opportunities for state or non-state adversaries to seek asymmetric advantages (i.e., low-cost actions which undermine high-cost sources of power) against advanced industrial countries, including the United States. Technological and political complexity generates tremendous uncertainty, undermining in one stroke both the simple logic of the basic deterrence frameworks applied in the previous era and also the credibility of such efforts. "Cross domain deterrence" (CDD) seeks to counter threats in one arena (such as space or cyber warfare) by relying on different types of capabilities (such as sea power or nuclear weapons, or even non-military tools such as access to markets or normative regimes) where deterrence may be more effective. The increasing complexity of CDD poses both opportunities and challenges that necessitate, and will benefit from, a major evolution in thinking (and practice) about how deterrence operates.

The University of California Institute on Global Conflict and Cooperation (IGCC), in collaboration with the Lawrence Livermore (LLNL) and Los Alamos National Laboratories (LANL), aims to develop analytical clarity concerning the effects of increasing technological and political complexity on the logic of CDD. We plan to combat the complexity of CDD by breaking the concept into three complementary characteristics of the global political system: *asymmetry*, *interdependence*, and *multipolarity*. These interrelated concepts are strongly affected but not uniquely determined by emerging technologies. They build on one another in a modular yet cumulative process which will enable us to systematically explore key questions such as: How does asymmetric access to nuclear weapons, counter-space operations, and cyberspace capabilities shape threats and the use of force? How does political-economic and technological interdependence affect strategic calculations and a willingness to fight or compromise? How does the proliferation of diverse types of weapons to a growing number of actors shape the nature of deterrence or alter its scope? Answers to these questions promise to advance the social science of national security and inform policy for tackling emerging cross-domain threats.

We propose to develop rigorous and empirically grounded causal theory drawing from and building on each of the three categories, and then to subject the resulting theory of cross domain deterrence to computational analysis and quantitative tests. We believe that the best results will be produced by a multi-method approach, combining qualitative analysis, formal modeling, historical case study, policy (area) studies, and computational simulation.

The Principal Investigator is Erik Gartzke, UC San Diego Department of Political Science and IGCC Steering Committee Member. The Co-Principal Investigator is Jon Lindsay, IGCC Postdoctoral Scholar. Co-Investigators include Michael Nacht, UC Berkeley; Celeste Matarazzo, Lawrence Livermore National Laboratory; and Joseph Pilat, Los Alamo National Laboratory.