## Espionage and Discrimination in Innovation

Bryant Walker Smith and Bryce Pilz bryantws@newlypossible.org

This paper analyzes the issue of "foreign influence" in technology and innovation from multiple descriptive, legal, and normative perspectives. Our motivation—and the paper's central theme— is the tension between, on one hand, preventing improper foreign infiltration of scientific research and development and, on the other hand, preventing invidious domestic discrimination against individuals and groups.

Descriptively, we bring taxonomical rigor to "foreign influence" as a concept that deserves more nuance than it often receives. First, we describe a public/private spectrum that ranges from espionage by foreign governmental actors to theft by foreign nongovernmental actors. Second, we categorize the many domestic activities that could potentially reflect foreign influence. Third, we classify the ways in which domestic researchers allegedly facilitate foreign influence.

Legally, we critically analyze the range of mechanisms designed to check this influence. The federal government, which spends over \$150 billion annually on scientific research, imposes numerous conditions on applicants and recipients of its funding, including disclosure of foreign activities and preferences for domestic manufacture. The 2020 indictment of Harvard's chemistry department chair is just one of many examples of the increased enforcement of these requirements. More broadly, the federal government scrutinizes foreign investment and now gives particular attention to foreign control of "technology infrastructure or data." High-profile federal prosecutions, including criminal charges against two former Apple engineers for allegedly stealing trade secrets in contemplation of work in China, also reflect private-sector participation in related efforts.

Normatively, we discuss how to manage the risks of these efforts. Policing foreign influence in innovation raises at least four issues. First, it entails legal determinations of foreignness. Second, it invites policies, procedures, and informal practices that may cross these legal lines, particularly given the troubling-yet-common treatment of Asian Americans as "perpetual foreigners" in the United States. Third, it risks disparate impacts that, even if legally justified by business necessity, nonetheless cause serious harm. Finally, it imposes substantial burdens that can impede or even deter scientific research and development.

We present concrete case studies, share multiple perspectives, and propose an approach that better accounts for the critical interests at stake.