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PROTECTING INDIVIDUALS, INSTITUTIONS, AND INNOVATION IN THE U.S. GOVERNMENT’S CRACKDOWN ON “FOREIGN INFLUENCE”

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Bryant Walker Smith* & Bryce Pilz**

Table of Contents

I.	Introduction	255
II.	Understanding “Foreign Influence”	255
	A. “Foreign Interaction” Rather than “Foreign Influence”	255
	B. Benefits of Foreign Interaction	257
	C. Risks of Foreign Interaction	259
III.	Federal Tools to Combat Improper Foreign Interaction	260
	A. Disclosure Requirements on Federal Grant Applications	260
	B. Other Tools Used by the U.S. Government to Combat Improper Foreign Interaction	265
	1. Reporting Requirements Under the Higher Education Act	265
	2. Scrutiny of Foreign Investment Under CFIUS	268

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3.	Conditions for Commercialization Under the Bayh-Dole Act	270
4.	“Export” Restrictions Under EAR and ITAR	272
5.	New Scrutiny of Foreign Access to Data	273
6.	Criminal Prohibition of Intellectual Property Theft	274
IV.	The “China Initiative”	275
A.	Background	275
B.	Our Taxonomy of “China Initiative” Prosecutions	277
1.	Identity of the Foreign Actor	278
2.	Position of the Domestic Actor	281
3.	Affiliation Between the Foreign and Domestic Actors	284
4.	Nature of the Domestic Actor’s Alleged Actions	287
5.	Alleged Culpability of the Domestic Actor	289
6.	Nationality and Residency Status of the Domestic Actor	292
7.	Ethnicity of the Domestic Actor	294
8.	Status of the Case	295
C.	Summary of Our Analysis	297
V.	Broader Impacts of the Crackdown	301
A.	Direct Impacts	301
B.	Indirect Impacts	303
C.	Role of Universities and Other Institutions	305
VI.	Toward a More Balanced Approach	308
A.	Recommendations for the U.S. Government	308
B.	Recommendations for Universities and Other Institutions	310
C.	Recommendations for Individuals	311
VII.	Conclusion	312

I. INTRODUCTION

“In this environment, I will not go forward with these startups.” These are the words of a researcher who has concluded that the personal and professional risks of commercializing their potentially lifesaving medical technology outweigh the corresponding benefits. Chief among these risks is running afoul of the federal government. Indeed, this researcher, like others with whom we spoke, was uncomfortable even being publicly identified.

Our motivation—and this Paper’s central theme—is the tension between, on one hand, preventing harm from foreign appropriation of scientific innovation and, on the other hand, preventing harm to that innovation and to the individuals and institutions responsible for it.

We explore this tension by cataloging the wide range of federal tools available to combat improper foreign interaction, by bringing taxonomical rigor to the U.S. government’s use of one of those tools—criminal prosecution—in service to what it once called its “China Initiative,” and by documenting the broader impacts of not only these prosecutions but also the investigations and other proceedings that surround them. We ultimately draw on this exploration to recommend concrete steps that the U.S. government, universities and other institutions, and individual researchers can take to protect the values on which innovation depends.

II. UNDERSTANDING “FOREIGN INFLUENCE”

A. “Foreign Interaction” Rather than “Foreign Influence”

Our effort to bring more rigor and nuance to discussions of improper foreign interaction starts with the language itself. “Foreign influence” is a term used by the

federal government¹ and, by extension, many universities² to describe a range of potentially concerning relationships and activities involving foreign contacts. But this term can be unhelpful in at least two related ways. First, it is often applied in a conclusory manner to mere interactions or affiliations that do not necessarily result in influence.³ Second, it is often used to mean “undue,” “inappropriate,” or “adverse” influence and hence can connote something sinister even when these qualifiers are absent.⁴ Foreign influence is ubiquitous, multidirectional, and often beneficial—not

¹ See, e.g., *Combating Foreign Influence*, FBI, <https://www.fbi.gov/investigate/counterintelligence/foreign-influence> [https://perma.cc/3KJ4-6WX3] (last visited Aug. 16, 2022); *Preparing for and Mitigating Foreign Influence Operations Targeting Critical Infrastructure*, CISA INSIGHTS (Feb. 2022), https://www.cisa.gov/sites/default/files/publications/cisa_insight_mitigating_foreign_influence_508.pdf [https://perma.cc/CJ4S-UVAQ]; Agency Actions Needed to Address Foreign Influence, 117th Cong. (2021) (statement of Candice N. Wright, Director, Science, Technology Assessment, and Analytics), <https://www.gao.gov/products/gao-22-105434> [https://perma.cc/7BAK-E9DV]; Agencies Need to Enhance Policies to Address Foreign Influence, U.S. S., 116th Cong. (2020), <https://www.gao.gov/products/gao-21-130> [https://perma.cc/NA7J-9TV2]; *Avoiding Undue Foreign Influence on IRP Research*, NIH, <https://oir.nih.gov/sourcebook/personnel/recruitment-processes-policies/guide-nih-intramural-principal-investigators-navigate-international> [https://perma.cc/DK5X-UWKR] (last visited Aug. 16, 2022); Foreign Influence Transparency Act, S. 577, 117th Cong. (2021–2022), <https://www.congress.gov/bill/117th-congress/senate-bill/577?s=1&r=98>.

² See, e.g., FAQs, UNIV. S.C.: OFF. RSCH. COMPLIANCE, https://sc.edu/about/offices_and_divisions/research_compliance/international_collaboration/faqs.php [https://perma.cc/ZBJ2-HQCA] (last visited Aug. 16, 2022); *Foreign Influence*, UNIV. N.C. RSCH., <https://research.unc.edu/comAcademicIntegrityandUndueForeignInterference/DoResearchpliance/foreign-influence/> [https://perma.cc/G7QJ-HTSU] (last visited Aug. 16, 2022); *Preventing Undue Foreign Influence on Research*, UNIV. VA.: VICE PRESIDENT FOR RSCH., <https://research.virginia.edu/foreign-influence> (last visited Aug. 16, 2022); *Academic Integrity and Undue Foreign Interference*, STAN. U.: DORESEARCH, <https://doresearch.stanford.edu/topics/academic-integrity-and-undue-foreign-interference> [https://perma.cc/K7WZ-Z6JT] (last visited Aug. 16, 2022); *Ethics, Compliance and Audit Services*, UNIV. CAL.: OFF. OF THE PRESIDENT (Aug. 18, 2021), <https://www.ucop.edu/ethics-compliance-audit-services/compliance/research-compliance/foreign-influence.html#undue> [https://perma.cc/4BRM-T7FJ].

³ See *infra* Section IV for a discussion of the cases under the “China Initiative” alleging a failure to disclose.

⁴ Compare *Combating Foreign Influence*, *supra* note 1 (“combatting foreign influence”), with *Avoiding Undue Foreign Influence on IRP Research*, *supra* note 1 (“avoiding undue foreign influence”) and with *Agency Actions Needed to Address Foreign Influence*, *supra* note 1 (both “address[ing] foreign influence” and “combatting undue foreign influence”); cf. *Adjudicative Guidelines for Determining Eligibility for Access to Classified Information*, 32 C.F.R. § 147 (2011), <https://www.govinfo.gov/content/pkg/CFR-2011-title32-vol1/pdf/CFR-2011-title32-vol1-part147.pdf> [https://perma.cc/54TB-S6AQ], and *Foreign Interference Taxonomy*, HOMELAND SEC. (July 2018), https://www.cisa.gov/sites/default/files/publications/19_0717_cisa_foreign-influence-taxonomy.pdf [https://perma.cc/BEH9-JMDM] (using in a different context the term “foreign interference” to indicate “malign actions” even though the filename itself still refers to “foreign influence”). As we discuss in a companion paper, the negative connotation of “discrimination” similarly overshadows its neutral connotation.

only in research but also in language, culture, business, and society generally. This complex reality is incompatible with a purely xenophobic appropriation of “foreign influence” as a term and as a concept.⁵

For these reasons, we generally use the term “foreign interaction” to describe a range of relationships and activities that could be manifestly proper, manifestly improper, or somewhere in the mushy middle. We use the term “(alleged) improper foreign interaction” to describe those (alleged) interactions that are (allegedly) unlawful. And we discuss actual effect (including “influence”) when relevant to our analysis. As the next section considers, the effect of foreign interaction can be positive, negative, or both.

B. *Benefits of Foreign Interaction*

International scientific collaboration has two broad benefits—one to science, and a second to the United States’ national interests. First, foreign scientific interactions enable better scientific outcomes. Beyond bringing together the best minds, international collaboration has been shown to spur heightened creativity. In the words of one researcher:

In our own [international collaboration] experiences we have found great benefit in sharing methods and protocols, previously unique to one region. This has forced us to challenge our taken-for-granted assumptions, move towards fresh perspectives and, in practical terms, aims to reduce disparities.⁶

It is not surprising that research has long shown a link between international co-authorship of scientific papers and both national publication productivity⁷ and research impact.⁸

⁵ Margaret Lewis makes a similar point that both the name and framing of the “China Initiative” effectively “criminaliz[es] China.” Margaret K. Lewis, *Criminalizing China*, 111 J. CRIM. L. & CRIMINOLOGY 145 (2020).

⁶ Dawn Freshwater et al., *International Research Collaboration: Issues, Benefits and Challenges of the Global Network*, 11 J. RSCH. IN NURSING 295, 297 (2006).

⁷ NAT’L ACADS. OF SCI, ENG’G, & MED., STRENGTHENING U.S. SCIENCE AND TECHNOLOGY LEADERSHIP THROUGH GLOBAL COOPERATION AND PARTNERSHIPS (2021), <https://nap.nationalacademies.org/read/26290/chapter/1> [<https://perma.cc/HQQ6-TC2E>].

⁸ Jennifer Dusdal & Justin J.W. Powell, *Benefits, Motivation, and Challenges of International Collaborative Research: A Sociology of Science Case Study*, 48 SCI. & PUB. POL’Y 235, 237 (2021).

Foreign scientific interaction also directly benefits the United States' interests. First, international engagement attracts and helps retain top scientific talent. A recent report from Fwd.us estimated that 100,000 international student graduates in the next decade will desire to stay and work in the United States after their graduation.⁹ These graduates would grow the U.S. economy by an estimated \$233 billion over the next decade.¹⁰

Foreign interaction also benefits the United States through foreign investment in U.S. startups. Foreign investment in U.S. startups can occur directly by a foreign investor providing capital to an early-stage company or indirectly by foreign investors investing as limited partners in U.S. venture capital funds. The National Venture Capital Association explains the important role of foreign investment in the U.S. venture ecosystem:

Passive foreign investment is vital to American startups as they grow, innovate and create jobs, and does not produce natural security concerns because the limited partners that invest into the U.S. venture funds do not gain access to sensitive information about the underlying companies in which the fund is invested.¹¹

More broadly, international collaborations allow early-stage technology companies to access foreign markets and important strategic partners.

Another way that foreign interaction benefits the United States is by enabling this country to take and maintain a strategic leadership role in the sciences, such as through participation in international standard-setting bodies. According to the Department of Commerce, standards or technical regulations impact approximately 93% of global trade, representing trillions of dollars.¹² Standards impact the deployment of 5G (and other advanced communications), additive manufacturing, artificial intelligence, biotechnology, quantum computing, and even road sign

⁹ PHILLIP CONNOR, *RETAINING U.S. INTERNATIONAL STUDENT GRADUATES: TO WIN THE GLOBAL TALENT RACE 6* (2022).

¹⁰ *Id.* at 7.

¹¹ Jeff Farrah, *Foreign Investment*, NAT'L VENTURE CAP. ASSOC., <https://nvca.org/foreign-investment/> [<https://perma.cc/SYH7-LA3Q>] (last visited Aug. 16, 2022).

¹² James Olthoff, *Setting the Standards: Strengthening U.S. Leadership in Technical Standards*, NAT'L INST. OF STANDARDS & TECH. (Mar. 17, 2022), <https://www.nist.gov/speech-testimony/setting-standards-strengthening-us-leadership-technical-standards> [<https://perma.cc/NHM5-BKGY>].

placement.¹³ According to an official with the National Institute of Standards and Technology, “U.S. competitiveness in technology requires leadership by U.S. industry in standardization. Leadership in standardization provides a first mover opportunity to drive technological innovation.”¹⁴

C. *Risks of Foreign Interaction*

Concerns about foreign interaction generally fall into two large and overlapping buckets: the prioritization and the protection of the United States. Under the aim of national prioritization, the U.S. government seeks to ensure that domestic innovation directly benefits the United States, particularly when that innovation is supported by public funding. For example, as discussed below, products incorporating federally funded inventions must be substantially manufactured in the United States.¹⁵ Both this principle and this specific requirement place the perceived domestic interests of the United States over those of any other country, including U.S. allies. These interests include showing a clear return on public investment, improving economic competitiveness, and controlling critical supply chains. Foreign interaction that results in unauthorized and even authorized transfers of intellectual property, especially on an exclusive basis, arguably presents risks to these interests.

Under the aim of national protection, the U.S. government seeks to guard against adverse actions by its adversaries. We refer to this as national protection rather than national security because the latter term is often used in an even broader sense. Innovation, ideas, and information can all be immensely valuable, and the supply chains that produce and deliver them can be vulnerable to infiltration, appropriation, and disruption. Threats to the “confidentiality, integrity, and

¹³ *Id.*

¹⁴ *Id.*

¹⁵ See *infra* notes 92–99 (Bayh-Dole Act of 1980). More than four decades after enactment of the Bayh-Dole Act, the politics and economics of domestic manufacturing remain very much alive, highlighted in part by the COVID-19 pandemic and Russia’s war in Ukraine. See, e.g., Susan Helper et al., *Why Does Manufacturing Matter? Which Manufacturing Matters? A Policy Framework*, METRO. POL’Y PROGRAM AT BROOKINGS (Feb. 2022), https://www.brookings.edu/wp-content/uploads/2016/06/0222_manufacturing_helper_krueger_wial.pdf [<https://perma.cc/48H7-AAYD>]; Gary P. Pisano & Willy C. Shih, *Does America Really Need Manufacturing?*, HARV. BUS. REV. (Mar. 2012), <https://hbr.org/2012/03/does-america-really-need-manufacturing> [<https://perma.cc/94Y9-QDKQ>]; Willy C. Shih, *Global Supply Chains in a Post-Pandemic World*, HARV. BUS. REV. (Sept.–Oct. 2020), <https://hbr.org/2020/09/global-supply-chains-in-a-post-pandemic-world> [<https://perma.cc/YR5L-9X7C>].

availability” of information can come from foreign interaction.¹⁶ This interaction could be illicit, as in the case of intellectual property theft.¹⁷ It may also be seemingly benign, as in the case of lawful data transfers that ultimately facilitate a cyberattack or provide important context for understanding or using other information that is illicitly obtained.¹⁸

III. FEDERAL TOOLS TO COMBAT IMPROPER FOREIGN INTERACTION

A. *Disclosure Requirements on Federal Grant Applications*

The anchor of the federal government’s crackdown on alleged improper foreign interaction is the disclosure requirements on federal grant applications. The National Science Foundation (NSF) and National Institutes of Health (NIH) have been at the center of this issue and provide useful examples of these disclosure requirements. With an annual budget of \$8.5 billion in fiscal year 2021, the NSF provides about 27% of all federal scientific research funding at U.S. research institutions.¹⁹ NIH, with a budget of \$41.7 billion in the 2020 fiscal year, is the world’s largest biomedical research agency.²⁰

The requirement to disclose certain foreign activities in grant applications is not new. NSF has included this requirement in its Proposal and Award Policies and Procedures Guide (PAPPG) since 1978.²¹ In particular, the PAPPG requires that applicants disclose specific information about collaborators and other affiliations for each individual identified as senior personnel on a project.²² The applicant also must

¹⁶ NAT’L BUREAU OF STANDARDS, COMP. SCI. & TECH.: AUDIT AND EVALUATION OF COMPUTER SECURITY (Zella G. Ruthberg & Robert G. McKenzie eds., 1997). These three pillars (“CIA”) are often called the “information security triad.”

¹⁷ *Id.*

¹⁸ *Id.*

¹⁹ *At a Glance*, NAT’L SCI. FOUND., <https://www.nsf.gov/about/glance.jsp> [<https://perma.cc/9L3N-GPR9>] (last visited Aug. 16, 2022).

²⁰ *Budget*, NAT’L INSTS. OF HEALTH (Aug. 10, 2022), <https://www.nih.gov/about-nih/what-we-do/budget> [<https://perma.cc/C347-HX23>].

²¹ NAT’L SCI. FOUND., SIGNIFICANT CHANGES AND CLARIFICATIONS TO THE PROPOSAL AND AWARD POLICIES AND PROCEDURES GUIDE (PAPPG) (NSF 19-1) II-5, II-24 (2019), https://www.nsf.gov/pubs/policydocs/pappg19_1/nsf19_1.pdf [<https://perma.cc/7PKC-W438>] [hereinafter PAPPG 2019].

²² *Id.* at II-5.

disclose all “[c]urrent and [p]ending [s]upport.”²³ Such support includes “foreign” support, whether monetary or otherwise, and whether made to an individual’s institution or directly to an individual.²⁴ Historically, NSF did not monitor grant recipients or principal investigators for compliance with these disclosures. Instead, NSF relies on the recipient institution to “vet and conduct due diligence on potential grantees.”²⁵ An “Authorized Organizational Representative” makes certifications regarding the accuracy and completeness of statements in the proposal and that the organization has instituted an acceptable conflicts of interest policy.²⁶

All NIH grant applications are made in response to a funding opportunity announcement. Historically, NIH did not, and was not required to, “proactively ensure that investigators disclose all sources of research support, financial interests, and affiliations.”²⁷ NIH collects two categories of information related to potential foreign influence. First, recipient institutions are responsible for reporting to NIH any financial conflict of interest on the part of an investigator.²⁸ NIH has an agency-wide conflict of interest policy requiring investigators to disclose certain information on a grant application.²⁹ NIH’s policy also requires universities to institute and maintain their own conflict of interest policy.³⁰ NIH’s conflict of interest policy

²³ *Id.* at II-23.

²⁴ *Id.*

²⁵ STAFF OF S. PERMANENT SUBCOMM. ON INVESTIGATIONS, 116TH CONG., THREATS TO THE U.S. RESEARCH ENTERPRISE: CHINA’S TALENT RECRUITMENT PLANS 3 (2019) (Staff Rep.), <https://www.hsgac.senate.gov/wp-content/uploads/imo/media/doc/2019-11-18%20PSI%20Staff%20Report%20-%20China's%20Talent%20Recruitment%20Plans%20Updated2.pdf> [<https://perma.cc/7H8L-XFE3>] [hereinafter 2019 SENATE REPORT]; *How U.S. Government Agencies Have Responded to Chinese Nationals Exploiting U.S. R&D*, SYNTHETIC (May 31, 2021), <https://synthetic.com/how-u-s-government-agencies-have-responded-to-chinese-nationals-exploiting-u-s-rd/> [<https://perma.cc/CR9Z-567T>].

²⁶ PAPPG 2019, *supra* note 21, at II-4; NAT’L SCI. FOUND., SIGNIFICANT CHANGES AND CLARIFICATIONS TO THE PROPOSAL AND AWARD POLICIES AND PROCEDURES GUIDE (PAPPG) (NSF 20-1) (2020), https://www.nsf.gov/pubs/policydocs/pappg20_1/nsf20_1.pdf [<https://perma.cc/UCT8-Z9XN>] [hereinafter PAPPG 2020].

²⁷ 2019 SENATE REPORT, *supra* note 25, at 52 (citing HHS IG Report: Reporting at 4 (Sept. 2019)).

²⁸ *Id.* (citing 42 C.F.R. § 50.604(d)).

²⁹ *NIH Should Take Further Action to Address Foreign Influence*, GAO 5 (Apr. 22, 2021), <https://www.gao.gov/assets/gao-21-523t.pdf> [<https://perma.cc/42WG-VC67>].

³⁰ *Id.*

focuses on financial conflicts of interest and does not specifically mention foreign conflicts of interest.³¹

The second category of information that NIH collects related to foreign interaction includes information which might be used to identify conflicts of interest.³² This information includes biographical details for key research personnel, other research support, and foreign components of the research (e.g., foreign partnerships or activities).³³

In the case of both NSF and NIH grant applications, while the institution submits the application, the principal investigator (PI) is required to provide certain assurances. Although NSF has recently made clear that the organization is responsible for the statements of its investigators,³⁴ ordinarily, most large research institutions receive certifications from individuals related to the information provided for proposal submission. As of 2006, NIH no longer required the principal investigator to sign the grant application, but instead required the applicant organization to secure and retain a written assurance from the principal investigator:

(1) that the information submitted within the application is true, complete and accurate to the best of the PI's knowledge; (2) that any false, fictitious, or fraudulent statements or claims may subject the PI to criminal, civil, or administrative penalties; and (3) that the PI agrees to accept responsibility for the scientific conduct of the project and to provide the required progress reports if a grant is awarded as a result of the application.³⁵

The indictment of former Ohio State University Professor Song Zheng shows the significance of these declarations. According to the federal government, Zheng was a member of multiple Chinese talent programs, received funding from the

³¹ *Id.*

³² *Id.*

³³ *Id.*

³⁴ *Frequently Asked Questions Regarding Current and Pending Support*, NSF (June 28, 2021), https://www.nsf.gov/bfa/dias/policy/cps_faqs/currentandpendingfaqs_june2021.pdf [<https://perma.cc/3G4Y-WTW6>].

³⁵ *NIH Announces Change in Business Process: Replacing Principal Investigator Signature on Grant Applications, Progress Reports, and Prior Approval Requests with an Institutional Compliance Requirement*, NIH (Apr. 7, 2006), <https://grants.nih.gov/grants/guide/notice-files/not-od-06-054.html> [<https://perma.cc/4KCQ-3LKV>].

Chinese government, and sought out other funding from at least ten Chinese biotechnology companies.³⁶ Zheng applied for and was awarded multiple NIH grants between 2013 and 2019, failing to disclose these relationships each time.³⁷ On each grant application, Zheng certified that the statements in them were true.³⁸ These false statements were the basis for the government’s indictment and Zheng’s guilty plea.³⁹

In response to its concerns about improper foreign interaction, the U.S. government has taken steps to tighten the disclosure requirements for institutions and investigators. In early 2018, NIH issued a notice reminding institutions of the disclosure requirements related to financial conflicts of interest.⁴⁰ Later that year, NIH Director, Francis Scott Collins, wrote to over 10,000 research institutions,⁴¹ identifying the threat from foreign influence, asking for help in addressing the threat, and participating in investigations.⁴² In 2019, the Senate Permanent Subcommittee on Investigations held hearings and issued a report titled, “Threats to the U.S. Research Enterprise: China’s Talent Recruitment Plans,” which details the perceived threat from China’s talent recruitment plans and weaknesses in federal granting programs to identify and protect against this threat.⁴³ Just prior to that report, NSF prohibited its employees from participating in foreign talent recruitment plans—though this prohibition did not extend to employees of grant recipients such as universities.⁴⁴

³⁶ *United States v. Zheng*, 27 F.4th 1239, 1241 (6th Cir. 2022).

³⁷ *Id.*

³⁸ *Id.*

³⁹ *Id.*

⁴⁰ *Financial Conflict of Interest: Investigator Disclosures of Foreign Financial Interests*, NIH (Mar. 30, 2018), <https://grants.nih.gov/grants/guide/notice-files/NOT-OD-18-160.html> [<https://perma.cc/UFV8-NHX3>].

⁴¹ Lev Facher, *NIH Investigating Researchers Who May Have Failed to Disclose Foreign Government Contributions*, SCI. AM. (Aug. 23, 2018), <https://www.scientificamerican.com/article/nih-investigating-researchers-who-may-have-failed-to-disclose-foreign-government-contributions/> [<https://perma.cc/F4FA-Y5SA>].

⁴² Letter from Francis S. Collins, Dir., NIH, to grantees (Aug. 20, 2018); Facher, *supra* note 41.

⁴³ 2019 SENATE REPORT, *supra* note 25.

⁴⁴ OFF. OF THE DIR., NAT’L SCI. FOUND., PERSONNEL POLICY ON FOREIGN GOVERNMENT TALENT RECRUITMENT PROGRAMS (2019), https://www.nsf.gov/bfa/dias/policy/researchprotection/PersonnelPolicyForeignGovTalentRecruitment%20Programs07_11_2019.pdf [<https://perma.cc/KML9-74S7>] (providing the policy that prohibits foreign talent recruitment plan participation).

In 2020, the Office of Science and Technology Policy issued guidance on the disclosure requirements for federal grant recipients related to foreign interaction.⁴⁵ Shortly thereafter, NIH,⁴⁶ NSF,⁴⁷ and the Department of Defense⁴⁸ issued guidance on the disclosure requirements related to foreign interaction. For example, the NIH notice reminded all grant recipients of the disclosure obligations related to “other support,” “foreign components,” and “financial conflicts of interest” and how these disclosures relate to improper foreign interaction concerns.⁴⁹

More recently, NIH announced that as of January 25, 2022, grant recipients must disclose copies of supporting documentation, including contracts, grants, or any other agreement specific to senior/key personnel foreign appointments and/or employment with a foreign institute for all foreign activities and resources that are reported in “other support.”⁵⁰ English translations are required for non-English documents.⁵¹

In addition to tightening the disclosure requirements around foreign interaction, the federal government also launched investigations into past conduct. NIH Deputy Director for Extramural Research, Michael Lauer, M.D., testified in an April 22, 2021 hearing before the Senate Health, Education, Labor and Pensions Committee that the NIH’s main areas of concern regarding foreign interaction were the failure of researchers to disclose “other support” from foreign sources and breaches of

⁴⁵ WHITE HOUSE OFF. SCI. & TECH. POL’Y, ENHANCING THE SECURITY AND INTEGRITY OF AMERICA’S RESEARCH ENTERPRISE (2020), <https://trumpwhitehouse.archives.gov/wp-content/uploads/2020/07/Enhancing-the-Security-and-Integrity-of-Americas-Research-Enterprise.pdf> [<https://perma.cc/X3ES-RSXX>].

⁴⁶ *Requirements for Disclosure of Other Support, Foreign Components and Conflicts of Interest*, NIH, <https://grants.nih.gov/policy/protecting-innovation.htm> [<https://perma.cc/RP7K-K8MV>] (last updated July 11, 2022); *Reminders of NIH Policies on Other Support and on Policies Related to Financial Conflicts of Interest and Foreign Components*, NIH (July 10, 2019), <https://grants.nih.gov/grants/guide/notice-files/NOT-OD-19-114.html> [<https://perma.cc/HW73-TZA3>] [hereinafter *Reminders of NIH Policies*].

⁴⁷ PAPPG 2020, *supra* note 26.

⁴⁸ Memorandum from Michael D. Griffin, Under Sec’y of Def. for Rsch. & Eng’g, U.S. Dep’t of Def., to Under Sec’y of Def. for Acquisition & Sustainment (Mar. 20, 2019).

⁴⁹ *Reminders of NIH Policies*, *supra* note 46.

⁵⁰ *Upcoming Changes to the Biographical Sketch and Other Support Format Page for Due Dates on or After May 25, 2021*, NIH (Mar. 12, 2021), <https://grants.nih.gov/grants/guide/notice-files/NOT-OD-21-073.html> [<https://perma.cc/2SPF-JAXG>].

⁵¹ *Id.*

confidentiality in the peer review system.⁵² According to Lauer, “As of April 2021, [NIH had] contacted more than 90 awardee institutions regarding concerns involving over 200 scientists.”⁵³

NIH has characterized its recent guidance as “clarifying long-standing NIH policies on disclosing other support.”⁵⁴ Researchers have questioned this characterization⁵⁵ and have generated a “crowd-sourced” spreadsheet cataloging changes to NIH guidance documents and providing suggestions.⁵⁶ We spoke to researchers who were concerned about NIH’s communications to the FBI which potentially have led the FBI to believe that no substantive changes had been made to the NIH position about disclosing other support.

B. Other Tools Used by the U.S. Government to Combat Improper Foreign Interaction

While disclosure requirements on grant applications have been central to the government’s crackdown on improper foreign interaction, they are not the government’s only tools. The government has a vast array of mechanisms at its disposal for monitoring and limiting foreign countries’ ability to improperly benefit from U.S.-funded research. This section briefly summarizes some of those mechanisms.

1. Reporting Requirements Under the Higher Education Act

Beginning in 1986, the Higher Education Act of 1965 (HEA) has included requirements for universities to biannually disclose institutional gifts and contracts

⁵² Christa Wagner, *Senate HELP Committee Holds Hearing on Foreign Influence in Biomedical Research*, AAMC (Apr. 23, 2021), <https://www.aamc.org/advocacy-policy/washington-highlights/senate-help-committee-holds-hearing-foreign-influence-biomedical-research> [https://perma.cc/76TX-CAEB].

⁵³ *Id.*

⁵⁴ Mike Lauer, *Clarifying Long-Standing NIH Policies on Disclosing Other Support*, NIH: EXTRAMURAL NEXUS (July 11, 2019), <https://nexus.od.nih.gov/all/2019/07/11/clarifying-long-standing-nih-policies-on-disclosing-other-support/> [https://perma.cc/Y23C-BTGG].

⁵⁵ E-mail from Anna Chih Lin, Dir., Lieberthanl-Rogel Ctr. for Chinese Stud., Univ. of Mich., to Eric Lander, Dir., Off. of Sci. & Tech. Pol’y, White House (Nov. 10, 2021).

⁵⁶ *Detailed Comments on NIH Disclosure Guidance*, UNIV. OF MICH. ASS’N OF CHINESE PROFESSORS (Nov. 10, 2021), https://umacp.org/docs/NIH_Changes_in_Guidance.2018-2021-rev.pdf [https://perma.cc/6XWD-9GUX].

received from “foreign entities.”⁵⁷ According to the Department of Education (DoEd), this requirement “sought to protect academic integrity threatened by gifts or contracts with foreign entities,” pointing to donations from Arab countries and partnerships with Japanese companies in the mid-1980’s as particularly concerning.⁵⁸ While this requirement was codified as Section 117 of the HEA in 1998,⁵⁹ DoEd did not promulgate regulations implementing it. The only guidance from DoEd came in the form of “Dear Colleague” letters in 1995 and 2004.⁶⁰ Generally speaking, HEA Section 117 requires universities to report foreign gifts having a value of over \$250,000.⁶¹

As part of its crackdown on alleged improper foreign interaction in university research, the U.S. government has pointed to Section 117 as an underutilized tool for understanding the scope of this interaction at universities. The 2019 Senate Permanent Subcommittee on Investigations Staff Report identified shortcomings in U.S. universities’ foreign gift and contract reporting processes.⁶² In particular, the report noted that “foreign government spending on U.S. schools is effectively a black hole, as there is a lack of reporting detailing the various sources of foreign government funding.”⁶³

In response to that report, in October 2020, DoEd issued its own report, “Institutional Compliance with Section 117 of the Higher Education Act of 1965.”⁶⁴ This report found that U.S. universities receive foreign funds through an “assortment of related intermediaries, including functionally captive foundations, foreign operating units, and other structures.”⁶⁵ The DoEd report expressed concern that universities were on notice of the national security threat posed by foreign influence

⁵⁷ Higher Education Act of 1965 § 117, 20 U.S.C. § 1011f.

⁵⁸ U.S. DEP’T OF EDUC., INSTITUTIONAL COMPLIANCE WITH SECTION 117 OF THE HIGHER EDUCATION ACT OF 1965 § IIA (2020) [hereinafter DoEd INSTITUTIONAL COMPLIANCE].

⁵⁹ *Id.* at 3.

⁶⁰ Letter from Mary Sue Coleman, President, Assoc. Am. Univ., to Stephanie Valentine, PRA Coordinator, U.S. Dep’t of Educ. (Mar. 11, 2020) [hereinafter Letter, Coleman, Assoc. Am. Univ.].

⁶¹ Higher Education Act of 1965 § 117, 20 U.S.C. § 1011f.

⁶² 2019 SENATE REPORT, *supra* note 25, at 54–57.

⁶³ *China’s Impact on the U.S. Education System: Hearing Before the S. Permanent Subcomm. on Investigations of the S. Comm. on Homeland Sec. and Gov’t Affs.*, 116th Cong. (2019).

⁶⁴ DoEd INSTITUTIONAL COMPLIANCE, *supra* note 58.

⁶⁵ *Id.* § I.

yet had continued to aggressively seek foreign gifts and other foreign funds.⁶⁶ It further noted that universities both “massively underreported” foreign gifts and also were “anonymizing much of the money [they] did disclose.”⁶⁷

Since 2019, DoEd has issued nineteen notices of investigations and records requests to U.S. universities for Section 117 failings.⁶⁸ Based on the first twelve of those notices, DoEd has stated that it has discovered more than \$6.5 billion in foreign money that went undisclosed.⁶⁹ DoEd has explained that a university’s failure to report foreign gifts under Section 117 could result in numerous penalties including a loss of federal financial aid.⁷⁰ In order to assist universities in their reporting obligations, DoEd has also launched a portal for universities to use in submitting their biannual Section 117 reports.⁷¹

The academic research community has expressed multiple concerns with DoEd’s intensified enforcement of the Section 117 reporting requirements. Organizations such as the American Council on Education,⁷² the Association of Governing Boards of Universities and Colleges,⁷³ the Council for Advancement and

⁶⁶ *Id.*

⁶⁷ *Id.*

⁶⁸ *Section 117 of the Higher Education Act of 1965*, U.S. DEP’T OF EDUC. (July 19, 2022), <https://www2.ed.gov/policy/highered/leg/foreign-gifts.html> [<https://perma.cc/C7NN-Z6RM>] (providing notices of investigations and records requests to: Georgetown University, Texas A&M University, Cornell University, Rutgers University, Massachusetts Institute of Technology, University of Maryland, Harvard University, Yale University, University of Texas, Case Western Reserve University, Fordham University, Stanford University, University of Alabama, Auburn University, Florida State University, Georgia State University, University of Nevada Las Vegas, University of New Mexico, and University of Wisconsin-Milwaukee).

⁶⁹ Jeremy Bauer-Wolf, *Ed Dept: Colleges that Don’t Report Foreign Gifts Could Lose Federal Aid*, HIGHER ED DIVE (Nov. 16, 2020), <https://www.highereddive.com/news/ed-dept-says-colleges-that-dont-report-foreign-gifts-could-lose-federal-fi/589105/> [<https://perma.cc/XV63-PLZE>].

⁷⁰ *Id.*

⁷¹ *See id.*

⁷² Letter from Terry Hartle, Senior Vice President, Gov’t Rel. & Pub. Affs., Am. Council on Educ., to Diane Jones, Delegated Under Sec’y & Assist. Sec’y for Postsecondary Educ., U.S. Dep’t of Educ. (Jan. 18, 2019) [hereinafter ACE, Hartle Letter]; Letter from Peter G. McDonough, Vice President & Gen. Couns., Am. Council on Educ. to Stephanie Valentine, PRA Coordinator, U.S. Dep’t of Educ. (Nov. 5, 2019) [hereinafter ACE, McDonough Letter].

⁷³ Letter from Henry Stoeber, President & CEO, AGB, to Hilary Malawi, Dir. of Info. Collection Clearance Div., U.S. Dep’t of Educ. (Nov. 5, 2019) [hereinafter AGB Letter].

Support of Education,⁷⁴ the Association of American Universities,⁷⁵ and the National Association of Student Financial Aid Administrators⁷⁶ have all made statements. Concerns included: (1) whether the \$250,000 reporting threshold had to be met by a single gift or could be met by multiple contracts; (2) the definition of “institution” for reporting requirements; (3) how corrections or amendments to prior reports could be submitted; (4) a lack of confidentiality and privacy concerns for contracts requiring disclosure; and (5) the administrative burden of the reporting obligations.⁷⁷

According to a comment letter from the Association of American Universities, DoEd did not respond to multiple requests for guidance from the higher education community in 2019, never issued formal regulations implementing Section 117, and has now removed from the Department’s website the two “Dear Colleague” letters from 1995 and 2004.⁷⁸

2. Scrutiny of Foreign Investment Under CFIUS

The 1988 Exon-Florio amendment of the Defense Production Act gave the President of the United States the power to investigate the impact on U.S. national security of “mergers, acquisitions, and takeovers” by foreign persons resulting in foreign control over a U.S. company or certain U.S. assets.⁷⁹ The President’s findings are not subject to judicial review, and this investigative power applies to both proposed and completed transactions.⁸⁰ In order to protect against the broad power of the President to block or unwind a transaction, parties may voluntarily seek review by the Committee on Foreign Investment in the United States (CFIUS).⁸¹ Twelve

⁷⁴ Letter from Sue Cunningham, President & CEO, CASE Council for Advancement & Support of Educ., to Levon Schlichter, U.S. Dep’t of Educ. (Dec. 14, 2020).

⁷⁵ Letter, Coleman, Assoc. Am. Univ., *supra* note 60.

⁷⁶ Letter from Justin Draeger, President & CEO, Nat’l Assoc. of Student Fin. Aid Adm’rs, to Mitchell M. Zais, Deputy Sec’y, U.S. Dep’t of Educ. (Aug. 1, 2019), https://www.nasfaa.org/uploads/documents/NASFAA_Foreign_Gift_Reporting.pdf.

⁷⁷ See ACE, Hartle Letter, *supra* note 72; AGB Letter, *supra* note 73; ACE, McDonough Letter, *supra* note 72.

⁷⁸ Letter, Coleman, Assoc. Am. Univ., *supra* note 60.

⁷⁹ JAMES K. JACKSON, CONG. RSCH. SERV., RL33312, THE EXON-FLORIO NATIONAL SECURITY TEST FOR FOREIGN INVESTMENT (2013).

⁸⁰ *Id.*

⁸¹ CFIUS Overview, U.S. DEP’T OF THE TREASURY, <https://home.treasury.gov/policy-issues/international/the-committee-on-foreign-investment-in-the-united-states-cfius/cfius-overview> [<https://perma.cc/7LSG-U7XC>] (last visited Mar. 18, 2023).

high-ranking heads of agencies and cabinet members comprise CFIUS.⁸² If approved by CFIUS, a transaction will enjoy a “safe harbor” from subsequent challenges.⁸³

Until recently, CFIUS had little impact on early-stage innovation, especially involving academic labs. The Federal Investment Risk Review Modernization Act of 2018 (FIRRMA), however, significantly expanded the scope of CFIUS to include investments in technology infrastructure or data businesses, even if foreign “control” does not result.⁸⁴ CFIUS applies to such business if a foreign investor is a member of the board of directors, has access to material nonpublic technical information, and is involved in substantive decision making.⁸⁵ With the passage of FIRRMA, CFIUS suddenly became highly relevant to the startup investment space.⁸⁶ Shortly after the implementation of FIRRMA, *The Washington Post* reported that the federal government increased its scrutiny of past foreign investments in U.S. tech startups.⁸⁷

After the implementation of FIRRMA, Chinese venture capital (VC) investments in U.S. companies plummeted. Chinese VC funds invested \$4.59 billion in U.S. startups in 2018 and only \$2.27 billion in 2019.⁸⁸

This decrease in investment directly impacts universities seeking to commercialize research innovations. In short: academic research commercialization relies on a delicate innovation ecosystem. Fewer investors to fund university startups means that fewer academic research innovations get their chance to reach the marketplace.

⁸² *Id.*

⁸³ *Id.*

⁸⁴ David Mortlock et al., *Expanded CFIUS Jurisdiction Under FIRRMA Regulations: An Overview*, WILLKIE FARR & GALLAGHER, <https://www.willkie.com/-/media/files/publications/2020/05/expandedcfiusjurisdictionunderfirmaregulations.pdf> [<https://perma.cc/VR7Z-C9W4>] (last visited Nov. 12, 2022).

⁸⁵ *Id.*

⁸⁶ Jeff Farrah, *CFIUS & VC: 3 Takeaways from the Final Rules and What Investors Must Know*, NAT'L VENTURE CAP. ASSOC. (Jan. 27, 2020), <https://nvca.org/cfius-vc-3-takeaways-from-the-final-rules-and-what-investors-must-know/> [<https://perma.cc/6YKM-Q4QT>].

⁸⁷ Jeanne Whalen, *TikTok Was Just the Beginning: Trump Administration Is Stepping up Scrutiny of Past Chinese Tech Investments*, WASH. POST (Sept. 29, 2020, 3:12 PM), <https://www.washingtonpost.com/technology/2020/09/29/cfius-review-past-Chinese-investment/> [<https://perma.cc/KF2D-WNMW>].

⁸⁸ Tracy Wen Liu, *Chinese VCs Lived the Silicon Valley High Life. Now the Party's Over*, WIRED (May 3, 2023), <https://www.wired.com/story/chinese-venture-capital-silicon-valley-party-over/>.

3. Conditions for Commercialization Under the Bayh-Dole Act

The federal government funds over \$150 billion in research each year at universities, national laboratories, and through other recipients of federal funding.⁸⁹ The Bayh-Dole Act of 1980 allowed contractors to elect title to inventions resulting from this federal funding.⁹⁰ This was a change from the existing framework, where the federal government retained title to most federally funded inventions, with limited success in allowing those inventions to reach the marketplace to provide public benefit.⁹¹ While the Bayh-Dole Act permitted contractors to own federally funded inventions, it provided certain requirements for those inventions; contractors should prioritize small businesses,⁹² report inventions to the federal government,⁹³ share revenues with inventors,⁹⁴ and use remaining revenues to fund additional research.⁹⁵ One of the primary motivations of the Bayh-Dole Act was to improve U.S. economic competitiveness.⁹⁶ Indeed, certain Bayh-Dole requirements are expressly aimed at supporting the U.S. economy, namely the requirement in 37 C.F.R. § 401.14(i):

Notwithstanding any other provision of this clause, the *contractor* agrees that neither it nor any assignee will grant to any person the exclusive right to use or

⁸⁹ JOHN F. SARGENT JR., CONG. RSCH. SERV. R46341, FEDERAL RESEARCH AND DEVELOPMENT (R&D) FUNDING: FY2021, at 1 (Dec. 17, 2020).

⁹⁰ See 35 U.S.C. § 202(a).

⁹¹ COUNCIL ON GOVERNMENTAL RELS., THE BAYH-DOLE ACT: A GUIDE TO THE LAW AND IMPLEMENTING REGULATIONS 2 (1999), https://www.umventures.org/sites/umventures.com/files/COGR_Bayh_Dole.pdf [<https://perma.cc/E6P9-MNUL>].

⁹² 37 C.F.R. § 401.7 (2018).

⁹³ 37 C.F.R. § 401.14(c) (2018).

⁹⁴ 37 C.F.R. § 401.14(k)(2) (2018) (sharing of revenues with inventors).

⁹⁵ 37 C.F.R. § 401.14(k)(3) (2018) (using revenues to support further research).

⁹⁶ John Aubrey Douglass, *Federally Funded Research, the Bayh-Dole Act, and the COVID Vaccine Race*, BERKELEY CTR. FOR STUD. IN HIGHER EDUC., RSCH. & OCCASIONAL PAPER SERIES 3 (2021), https://cshe.berkeley.edu/sites/default/files/publications/rops.cshe.3.2021.douglass.fedresearchbayhdolecovid.2.23.2021_1.pdf [<https://perma.cc/A5K8-TDCX>] (“In a campaign that began during the Carter administration, leaders at the NSF sought evidence of the economic impact of federally funded academic research, launching a series of studies to provide data. The goal was to bolster the argument that science funding generated broad social goods, including making the U.S. more economically competitive. It was an argument that found increasing support in the business sector and within the halls of Congress.”).

sell any subject inventions in the United States unless such person agrees that any products embodying the subject invention or produced through the use of the subject invention will be manufactured substantially in the United States.⁹⁷

This requirement that exclusive licensees substantially manufacture products that incorporate federally funded inventions in the United States is not absolute. Recipients of federal funding may seek a waiver of this requirement from the funding agency by showing either: (1) “reasonable but unsuccessful efforts have been made to grant licenses on similar terms to potential licensees that would be likely to manufacture substantially in the United States,” or (2) “that under the circumstances domestic manufacture is not commercially feasible.”⁹⁸

The conventional wisdom is that the waiver process is time intensive and requires specific information about the circumstances of the relevant technology.⁹⁹ Nonetheless, up until recently, the perception had been that funding agencies would typically grant well-prepared waiver requests. Indeed, a Freedom of Information Act request from Johns Hopkins University showed no records of NIH denying a U.S. manufacturing waiver request between 2011 and 2015.¹⁰⁰

Recently, however, the perception in the academic tech transfer field is that manufacturing waiver requests are receiving significantly more scrutiny. This requirement can make it difficult to license certain federally funded technologies for which U.S. manufacturing may be impractical.¹⁰¹

⁹⁷ 37 C.F.R. § 401.14(i) (2018) (emphasis added).

⁹⁸ *Id.*

⁹⁹ *Applying for a Waiver from U.S. Manufacturing Requirements for Federally Funded Intellectual Property*, BLOOMBERG L. (Aug. 18, 2015, 5:51 PM), <https://news.bloomberglaw.com/pharma-and-life-sciences/applying-for-a-waiver-from-us-manufacturing-requirements-for-federally-funded-intellectual-property> [<https://perma.cc/YSK2-9NR6>]; also see NIH Waiver request application here: *Submitting a Domestic Manufacturing Waiver Request*, IEDISON (July 1, 2022), <https://www.nist.gov/iedison/iedison-organization-user-guide/invention-reports/submitting-domestic-manufacturing-waiver> [<https://perma.cc/4RNP-4FGE>].

¹⁰⁰ Zack Struver, *NIH Waivers for U.S. Manufacturing Requirements for Federally-Funded Drugs, 2011 to May 2015*, KNOWLEDGE ECOLOGY INT’L (Sept. 17, 2016), <https://www.keionline.org/23156> [<https://perma.cc/Y5PD-RWFX>].

¹⁰¹ *Which of the Following Statements Is True of the Bayh-Dole Act of 1980?*, WELCHESKW, <https://welcheskw.com/which-of-the-following-statements-is-true-of-the-bayh-dole-act-of-1980/> [<https://perma.cc/5L64-HXYT>] (last visited Feb. 13, 2023) (“In a global economy, this requirement poses difficult interpretation problems for the Government and private sector parties.”).

In particular, the Department of Energy (DOE) recently announced a Determination of Exceptional Circumstances under the Bayh-Dole Act for all DOE funding agreements.¹⁰² The Determination of Exceptional Circumstances permits DOE to require applicants to include a U.S. manufacturing plan as a part of a proposal.¹⁰³ Additionally, DOE may now extend the U.S. manufacturing requirement to include the grantee itself (right now the grantee is required to impose the requirement in exclusive licenses), will apply this requirement to all licenses (whether exclusive or nonexclusive), and may punish a violation by withdrawing patent rights.¹⁰⁴

4. “Export” Restrictions Under EAR and ITAR

The United States restricts the export of “dual use” goods, which are products that may be used for civilian or military purposes, as well as certain specific goods, such as defense articles or nuclear materials.¹⁰⁵

Under the Export Controls Act (ECA), the Secretary of Commerce maintains a list of controlled goods as well as foreign persons or entities deemed to be a threat to the national security of the United States, and accordingly requires export control licenses.¹⁰⁶ The Export Administration Regulations (EAR) implement the ECA and contain ten categories of controlled items: electronics; computers; telecommunications and information security; lasers and sensors; navigation and avionics; marine; propulsion systems; nuclear materials and equipment; materials, organisms, microorganisms, and toxins; and materials processing.¹⁰⁷ The designation of countries to which controls are applied is based on policy, such as antiterrorism, regional stability, or crime control.¹⁰⁸

¹⁰² *Department of Energy Determination of Exceptional Circumstances Under the Bayh-Dole Act to Further Promote Domestic Manufacture of DOE Science and Energy Technologies*, DEP’T OF ENERGY (Feb. 7, 2021), <https://www.energy.gov/sites/default/files/2021-07/DEC%20for%20Science%20and%20Energy%20Technologies%20signed%206-7-2021.pdf> [https://perma.cc/N6Z8-BBKD].

¹⁰³ *Id.* at 14.

¹⁰⁴ *Id.*

¹⁰⁵ 50 U.S.C. § 4801(2).

¹⁰⁶ 50 U.S.C. § 4813(a).

¹⁰⁷ 7 C.F.R. § 738.2 (2022).

¹⁰⁸ See IAN F. FERGUSSON & PAUL K. KERR, CONG. RSCH. SERV., R41916, THE U.S. EXPORT CONTROL SYSTEM AND THE EXPORT CONTROL REFORM INITIATIVE 3 (2020).

In addition to the ECA, the Arms Export Control Act (AECA) governs military export controls.¹⁰⁹ The International Traffic in Arms Regulations (ITAR) implements the licensing regime of the AECA.¹¹⁰ A license is required for any good identified on the U.S. Munitions List, with limited exemptions for Canada.¹¹¹

Violations of either the ECA or AECA are punishable by imprisonment or fine.¹¹² Enforcement of these statutes is shared by the Department of Homeland Security, the Department of Justice, and the Defense Criminal Investigative Service.¹¹³

We put “export” in quotations because of the important concept of “deemed export.” A “deemed export” includes the release of controlled technology to a foreign person in the United States.¹¹⁴ A “release” broadly includes a verbal exchange, demonstration, or inspection.¹¹⁵ This broad conception of “export” routinely impacts the scientific research setting, such as universities, research institutions, biochemical firms, and technology companies. This is in part because some of these activities do not fall under the “fundamental research exemption,” which exempts from the EAR licensing requirements “basic and applied research in science and engineering where the resulting information is ordinarily published and shared broadly within the scientific community.”¹¹⁶

5. New Scrutiny of Foreign Access to Data

Concerns about foreign access to the personal information of Americans is not new. Congress extended CFIUS review to data businesses in 2018,¹¹⁷ and the Committee somewhat famously used its authority to successfully force the Chinese

¹⁰⁹ 50 U.S.C. § 4825.

¹¹⁰ 22 C.F.R. § 120 (2022).

¹¹¹ 22 U.S.C. § 2778.

¹¹² FERGUSSON & KERR, *supra* note 108, at 4, 6.

¹¹³ *Id.* at 7.

¹¹⁴ 15 C.F.R. § 734.13 (2022).

¹¹⁵ 15 C.F.R. § 734.15 (2022).

¹¹⁶ *Id.* § 734.8.

¹¹⁷ CATHLEEN D. CIMINO-ISAACS, CONG. RSCH. SERV., IF10952, CFIUS REFORM UNDER FIRMA (2020).

owners of the gay dating app Grindr to sell it.¹¹⁸ The Trump administration sought to ban the Chinese-owned apps TikTok and WeChat, a move that was blocked by U.S. courts and eventually reversed by the Biden administration.¹¹⁹ Both administrations also directed additional agency actions focused on data.¹²⁰

Recent reporting has suggested that the Biden administration is now considering another executive order to take further steps.¹²¹ These may include authorizing the U.S. Attorney General to “review and potentially bar commercial transactions involving the sale of or access to data if they pose an undue risk to national security” and seeking to bar recipients of federal funding from transferring personal health data to entities controlled by “foreign adversaries,” among other steps.¹²²

6. Criminal Prohibition of Intellectual Property Theft

While intellectual property infringement is typically a civil matter, there are particular instances of intellectual property violations that have been criminalized. For example, the Economic Espionage Act of 1996 (EEA) criminalizes two instances of trade secret theft.¹²³ First, trade secret misappropriation is criminal when one attempts to benefit a foreign government, instrumentality, or agent.¹²⁴ Second, trade secret misappropriation is also criminal when it economically benefits anyone other than the owner and the actor intends or knows that the act will injure the owner.¹²⁵

¹¹⁸ Carl O’Donnell et al., *Exclusive: Told U.S. Security at Risk, Chinese Firms Seeks to Sell Grindr Dating App*, REUTERS (Mar. 27, 2019, 1:02 AM), <https://www.reuters.com/article/us-grindr-m-a-exclusive/exclusive-told-u-s-security-at-risk-chinese-firm-seeks-to-sell-grindr-dating-app-idUSKCN1R809L>.

¹¹⁹ Karen Freifeld & David Shepardson, *Biden Drops Trump Attempt to Ban TikTok, WeChat; Orders New Review*, REUTERS (June 10, 2021, 4:07 AM), <https://www.reuters.com/technology/us-withdrawing-trump-executive-orders-that-sought-ban-tiktok-wechat-2021-06-09/> [<https://perma.cc/3FRC-DTGM>]; Proclamation No. 14034, 86 Fed. Reg. 31423 (June 9, 2021) [hereinafter Proclamation No. 14034].

¹²⁰ Proclamation No. 13,873, 84 Fed. Reg. 22689 (May 15, 2019); Proclamation No. 14034, *supra* note 119.

¹²¹ Alexandra Alper & Karen Freifeld, *Exclusive: Biden Eyes New Ways to Bar China from Scooping up U.S. Data*, REUTERS (May 12, 2022, 5:24 AM), <https://www.reuters.com/world/us/exclusive-biden-eyes-new-ways-bar-china-scooping-up-us-data-2022-05-11/> [<https://perma.cc/C3XQ-UEUR>].

¹²² *Id.*

¹²³ See 18 U.S.C. §§ 1831–32 (2018).

¹²⁴ *Id.* § 1831(a)(5).

¹²⁵ *Id.* § 1832(a).

Due to the breadth of these categories, the EEA is a major tool in the U.S. government’s crackdown on alleged improper foreign interaction.¹²⁶

IV. THE “CHINA INITIATIVE”

A. Background

In 2018, the U.S. Department of Justice (DOJ) launched its “China Initiative” as an umbrella for efforts to “counter[] Chinese national security threats” including “trade secret theft, hacking and economic espionage, . . . foreign direct investment, supply chain threats and the foreign agents seeking to influence the American public and policymakers without proper registration.”¹²⁷

Of the initiative’s ten stated goals, the first two entailed prosecuting “priority trade secret theft cases” and developing “an enforcement strategy concerning non-traditional collectors (e.g., researchers in labs, universities, and the defense industrial base) that are being co-opted into transferring technology contrary to U.S. interests.”¹²⁸ These two goals are closely associated with the initiative’s most public aspect: the criminal prosecutions, mostly of individual researchers, for alleged improper conduct related in some way to foreign interactions, including many interactions that on their own were not necessarily unlawful or improper.

In the years since, the “China Initiative” has generated significant controversy and criticism. Some critiques address the initiative as a whole: Margaret Lewis powerfully argues that while “the DOJ is not making up a threat,” it is dangerously “framing that threat” by conflating the Chinese “party-state,” Chinese “nationality and national origin,” and “Chinese ethnicity.”¹²⁹ Some critiques focus on the criminal prosecutions that reporters, researchers, advocates, or the DOJ itself link to

¹²⁶ See generally Andrew Chongseh Kim, *Prosecuting Chinese “Spies”: An Empirical Analysis of the Economic Espionage Act*, 40 CARDOZO L. REV. 749 (2018).

¹²⁷ Press Release, Jeff Sessions, Att’y Gen., Dep’t of Just., Attorney General Jeff Session’s China Initiative Fact Sheet (Nov. 1, 2018) [hereinafter Press Release, Sessions].

¹²⁸ *Id.* The third goal, educating “colleges and universities about potential threats to academic freedom and open discourse from influence efforts on campus,” *id.*, is striking given the concerns we describe below about the chilling effect that the China Initiative itself has had in research communities, see *infra* Section V.

¹²⁹ Lewis, *supra* note 5, at 147–48.

the initiative.¹³⁰ These critiques tend to highlight both systematic¹³¹ and individual¹³² concerns about prosecutorial excess, racial bias, and unwarranted harm.

Eileen Guo, Jess Aloe, and Karen Hao, for example, compiled and recently published a database of cases related to the “China Initiative.”¹³³ They found that a plurality of the cases that they identified within the initiative’s ambiguous scope implicated “research integrity,” that many of these research-integrity cases have “no clear links to national security,” that prosecutions have resulted in fewer convictions than might be expected from broader federal statistics, and that the overwhelming majority of defendants are “people of Chinese origin.”¹³⁴

A year into the Biden administration,¹³⁵ efforts by researchers and advocates prompted the Department of Justice to announce a “new approach” to “the most severe threats from a range of hostile nation-states.”¹³⁶ This announcement appears to retire the “China Initiative” name¹³⁷ and to signal more skepticism toward the use

¹³⁰ See Eileen Guo et al., *We Built a Database to Understand the China Initiative. Then the Government Changed its Records*, MIT TECH. REV. (Dec. 2, 2021), <https://www.technologyreview.com/2021/12/02/1039397/china-initiative-database-doj/> [<https://perma.cc/K5FJ-ZLNB>] [hereinafter Guo et al., *We Built a Database to Understand the China Initiative*] (describing how the China Initiative’s webpage is incomplete, inconsistent, and changing).

¹³¹ Eileen Guo et al., *The U.S. Crackdown on Chinese Economic Espionage Is a Mess. We Have the Data to Show It*, MIT TECH. REV. (Dec. 2, 2021), <https://www.technologyreview.com/2021/12/02/1040656/china-initiative-us-justice-department/> [<https://perma.cc/R326-SQKH>].

¹³² *Impacted Persons*, APA JUSTICE, <https://www.apajustice.org/victims.html> [<https://perma.cc/MRA8-ECGW>] (last visited Aug. 17, 2022).

¹³³ Guo et al., *We Built a Database to Understand the China Initiative*, *supra* note 130.

¹³⁴ *Id.*

¹³⁵ The change in administration has brought new political leadership to the U.S. Department of Justice but not its Federal Bureau of Investigation. See *Christopher Wray, August 2, 2017—Present*, FBI HISTORY, <https://www.fbi.gov/history/directors/christopher-wray> [<https://perma.cc/8RJ2-JK7A>] (last visited Aug. 17, 2022); compare Press Release, Sessions, *supra* note 127, with Christopher Wray, *Countering Threats Posed by the Chinese Government Inside the U.S.* (Jan. 31, 2022), <https://www.fbi.gov/news/speeches/countering-threats-posed-by-the-chinese-government-inside-the-us-wray-013122> [<https://perma.cc/R4TR-2JET>]. In addition, new administrations often replace many of the “United States Attorneys” but not the career attorneys who staff the DOJ’s cases.

¹³⁶ Press Release, Matthew G. Olson, Assistant Att’y Gen., U.S. Dep’t of Just., *Countering Nation-State Threats* (Feb. 23, 2022) [hereinafter Press Release, Olson].

¹³⁷ *Id.* (“[G]rouping cases under the China Initiative rubric . . . helped give rise to a harmful perception that the department applies a lower standard to investigate and prosecute criminal conduct related to that country or that we in some way view people with racial, ethnic or familial ties to China differently.”).

of criminal prosecution in “cases involving academic integrity and research security.”¹³⁸ It has not, however, comforted critics who highlight ongoing prosecutions and unchanged rhetoric.¹³⁹

It is not surprising that these concerns do not stop with the “China Initiative”—in part because they did not start with this initiative. Andrew Chongseh Kim analyzed a sample of 136 cases brought under the Economic Espionage Act between 1997 and 2015.¹⁴⁰ By distinguishing between Chinese-named and “Western-named” defendants, they reached several relevant conclusions: the proportion of Chinese-named defendants rose dramatically after 2009; these defendants were twice as likely as Western-named defendants to be “never proven guilty of espionage or any other serious crime” (from which the authors exclude false statements); and those Chinese-named defendants who were convicted of espionage received an average sentence that was more than twice as long as the average sentence received by Western-named defendants.¹⁴¹ The nuanced and nonetheless concerning theories offered as potential explanations for these disparities are relevant to our analysis as well.

B. *Our Taxonomy of “China Initiative” Prosecutions*

In order to better understand the subject matter covered by the government’s “China Initiative,” we created a taxonomy based on forty highly publicized criminal prosecutions of alleged improper foreign interaction. The majority of these case studies were identified from the Department of Justice’s own website, which provides examples of its criminal prosecutions under the initiative.¹⁴² We identified other cases from prominent news media. Our goal in creating this taxonomy was to

¹³⁸ *Id.* (“In evaluating [these] cases moving forward, [the DOJ’s National Security Division] will work with the FBI and other investigative agencies to assess the evidence of intent and materiality, as well as the nexus to our national or economic security. These considerations will guide our decisions—including whether criminal prosecution is warranted or whether civil or administrative remedies are more appropriate.”).

¹³⁹ See, e.g., Michael German, Opinion, *End of Justice Department’s ‘China Initiative’ Brings Little Relief to U.S. Academics*, BRENNAN CTR. FOR JUST. (Mar. 25, 2022), <https://www.brennancenter.org/our-work/analysis-opinion/end-justice-departments-china-initiative-brings-little-relief-us> [<https://perma.cc/W3KK-P5QH>]; Guo et al., *We Built a Database to Understand the China Initiative*, *supra* note 130 (describing how existing and new prosecutions have continued under the Biden administration).

¹⁴⁰ Kim, *supra* note 126.

¹⁴¹ *Id.*

¹⁴² *Information About the Department of Justice’s China Initiative and a Compilation of China-Related Prosecutions Since 2018*, U.S. DEP’T OF JUST. ARCHIVES (Nov. 19, 2021), <https://www.justice.gov/archives/nsd/information-about-department-justice-s-china-initiative-and-compilation-china-related> [<https://perma.cc/24CP-F7QB>].

understand the types of actions and actors involved in the foreign interaction that the government believes (or, in some cases, believed) to be criminal. In particular, we classified, (1) the identity of the foreign actor; (2) the position of the domestic actor; (3) the affiliation between the foreign and domestic actor; (4) the nature of the domestic actor's actions; (5) the alleged culpability of the domestic actor; (6) the nationality/residency of the domestic actor; (7) the ethnicity of the domestic actor; and (8) the status of the prosecution. We examined our findings and searched for patterns. More importantly, we gained a better understanding of the subject matter the government deemed criminal which in turn provides insight into the collateral impact of these prosecutions on uncharged domestic actors.

1. Identity of the Foreign Actor

Foreign interaction generally entails at least two actors. The foreign entity involved in this interaction might fall anywhere along a spectrum from a private individual to a national government, including:

1. Putatively private individual or entity,¹⁴³
2. Foreign university,
3. Foreign government acting indirectly (e.g., through state-controlled company), and
4. Foreign government acting directly (including through “talent programs” or the military)

The prosecution of Ji Wang for allegedly stealing trade secrets from his employer, Corning, illustrates alleged improper foreign interaction involving a foreign private entity.¹⁴⁴ Wang had allegedly formed a private company in China, Quantum Wave, and tried unsuccessfully to raise money from the Chinese government and other foreign investors.¹⁴⁵

The prosecution and eventual acquittal of Anming Hu, an engineering professor at the University of Tennessee, illustrates alleged improper foreign interaction

¹⁴³ We recognize that there are complex relationships between putatively private companies and governments (including dominant or exclusive political parties such as the Chinese Communist Party), particularly in the case of the PRC.

¹⁴⁴ *Foreign Influence: Former Scientist Indicted for Stealing US Military Technology*, CHOATE (July 9, 2021), <https://www.choate.com/insights/foreign-influence-former-scientist-indicted-for-stealing-us-military-technology.html> [<https://perma.cc/UNN3-9KSX>].

¹⁴⁵ *Id.*; as of April 2023, this case is still pending.

involving a foreign university.¹⁴⁶ Hu allegedly failed to disclose his affiliation with Beijing University when he applied for NASA funding.¹⁴⁷ Federal law prohibits the use of NASA funds in collaboration with China. DOJ alleged that this amounted to “fraudulent conduct that is devised to undermine federally mandated funding restrictions related to China and Chinese universities.”¹⁴⁸

The federal prosecution of Fujian Jinhua Integrated Circuit illustrates alleged “foreign influence” involving a state-owned company.¹⁴⁹ Fujian Jinhua, a company owned by the government of the People’s Republic of China was accused along with a Taiwanese company and three Taiwanese nationals of a conspiracy to steal, convey, and possess stolen trade secrets of Micron, a U.S.-based semiconductor company.¹⁵⁰ The indictment alleged a complex chain: one of the individuals left a Taiwanese subsidiary of Micron to join the Taiwanese company and recruited numerous Micron employees; that company formed a cooperation agreement with Fujian Jinhua; and some of the recruited individuals provided that state-owned company with confidential information from their former employer.¹⁵¹

China reportedly has over 150,000 state-owned companies, more than any other country.¹⁵² Almost all Chinese companies were state-owned until 1978.¹⁵³ Many have since privatized, but state-owned companies still play a major role, including

¹⁴⁶ Press Release, Off. of Pub. Affs., U.S. Dep’t of Just., Researcher at University Arrested for Wire Fraud and Making False Statements About Affiliation with a Chinese University (Feb. 27, 2020).

¹⁴⁷ *Id.*

¹⁴⁸ *Id.* The University of Tennessee reinstated Hu in early 2022. Becca Wright, *Anming Hu, Professor Falsely Accused of Espionage, Reinstated by University of Tennessee*, KNOXNEWS (Feb. 3, 2022, 10:08 AM), <https://www.knoxnews.com/story/news/education/2022/02/03/anming-hu-reinstated-university-of-tennessee-false-espionage-charge/9008950002/> [<https://perma.cc/DHL4-ESGW>].

¹⁴⁹ Press Release, Off. of Pub. Affs., U.S. Dep’t of Just., PRC State-Owned Company, Taiwan Company, and Three Individuals Charged with Economic Espionage (Nov. 1, 2018).

¹⁵⁰ *Id.*

¹⁵¹ *Id.* This criminal case is ongoing, with a bench trial scheduled for August 2023.

¹⁵² Wang Tianyu, *Explainer: Why Does China Have so Many State-Owned Enterprises?*, CHINA GLOB. TELEVISION NETWORK (June 14, 2021, 10:51 PM), <https://news.cgtn.com/news/2021-06-14/Explainer-Why-China-has-so-many-state-owned-enterprises-115vt8ntcZ2/index.html> [<https://perma.cc/AW2M-BUCW>].

¹⁵³ *Id.*

in construction of China's highway system.¹⁵⁴ The 2020 Fortune Global 500 list includes ninety-one Chinese state-owned companies.¹⁵⁵

The prosecution of Emory Professor Xiao-Jiang Li illustrates a researcher's alleged involvement with a governmental recruitment program.¹⁵⁶ Li allegedly participated in the Thousand Talents Plan, the most prominent of the Chinese governmental programs that have been at the center of the U.S. government's crackdown on foreign influence.¹⁵⁷ Talent programs are discussed in more detail in the "Affiliation Between the Foreign and Domestic Actors" category below.

While talent programs are a common mechanism for a federal government to interact with domestic researchers, other fact patterns exist. For example, former Stanford researcher Chen Song was indicted for allegedly lying about her affiliation with the Chinese military on her visa application and to authorities when questioned.¹⁵⁸ These charges were dropped.¹⁵⁹

¹⁵⁴ *Id.*

¹⁵⁵ *Id.*

¹⁵⁶ Press Release, Off. of Pub. Affs., U.S. Dep't of Just., Former Emory University Professor and Chinese "Thousand Talents" Participant Convicted and Sentenced for Filing a False Tax Return (May 11, 2020).

¹⁵⁷ *Id.* Li entered into a plea agreement, and he "is now a researcher for China's National Academy of Sciences." *Xiao-Jiang Li 李晓江*, APA JUST., <https://www.apajustice.org/xiao-jiang-li.html> [https://perma.cc/KHD7-63BJ] (last visited May 4, 2023).

¹⁵⁸ Press Release, Off. of Pub. Affs., U.S. Dep't of Just., Federal Charges Against Stanford University Researcher Expanded (Feb. 19, 2021) [hereinafter Press Release, Stanford Researcher].

¹⁵⁹ Ellen Nakashima & David Nakamura, *U.S. Drops Cases Against Five Researchers Accused of Hiding Ties to Chinese Military*, WASH. POST (July 23, 2021, 8:50 PM), https://www.washingtonpost.com/national-security/us-drops-cases-against-five-researchers-accused-of-hiding-ties-to-chinese-military/2021/07/23/54a8b268-ec04-11eb-8950-d73b3e93ff7f_story.html [https://perma.cc/W59N-P3FJ].

Table 1 shows the occurrences of each category of foreign actors.

Table 1. Occurrences of Each Category of Foreign Actors. Credit: Walker Smith & Pilz

Identity of the Foreign Actor	Number of Cases
Putatively private company or individual	10
Foreign university	2
Foreign government indirectly (e.g., state-controlled company)	4
Foreign government directly (e.g., talent program, military engagement, etc.)	24

Given the U.S. government’s stated concern about improper foreign interactions that benefit foreign governments, it is not surprising that a majority of the cases involved a foreign government interacting with a U.S. actor.

2. Position of the Domestic Actor

The domestic actor, who in prosecutions under the “China Initiative” is often the defendant, could be:

1. A university faculty member or senior federal laboratory researcher;
2. A university graduate student, post-doc, or other non-faculty researcher;
3. A private-sector scientist; and
4. An entrepreneur or businessperson.

These categories are not necessarily exclusive of each other. Universities can be public or private, and they often work closely with private-sector companies. Furthermore, researchers might be or become entrepreneurs. Indeed, as we noted above, the commercialization of research is often part of realizing its public benefits.

Lin Yang of the University of Florida is an example of a university faculty member.¹⁶⁰ The U.S. government charged Yang with six counts of wire fraud and four counts of making false statements to a government agency.¹⁶¹ Yang received a \$1.5 million NIH grant to develop an imaging and informatics tool known as MuscleMiner.¹⁶² Yang allegedly failed to disclose on the grant applications his affiliations with the Chinese company Deep Informatics.¹⁶³

The prosecution of Turab Lookman illustrates a senior federal laboratory researcher charged with improper foreign interaction.¹⁶⁴ Lookman had served as a researcher at Los Alamos National Laboratory for over two decades when he was charged with making false statements to the Department of Energy about his association with a Chinese talents program.¹⁶⁵

An example of the second category—university graduate student, post-doc, or other non-faculty researcher—is the prosecution of Chen Song. The U.S. government charged Song, a researcher at Stanford University, with visa fraud, obstruction of justice, destruction of documents, and false statements for allegedly concealing her affiliation with China’s military.¹⁶⁶

The prosecution of Monsanto scientist Haitao Xiang is an example of the third category, private researchers. Monsanto and its subsidiary, the Climate Corporation, employed Xiang as an imaging scientist.¹⁶⁷ The U.S. government charged Xiang with conspiring to commit economic espionage by allegedly taking Monsanto’s

¹⁶⁰ Press Release, Off. of Pub. Affs., Dep’t of Just., Former University of Florida Researcher Indicted for Scheme to Defraud National Institutes of Health and University of Florida (Feb. 3, 2021) [hereinafter Press Release, Former University of Florida Researcher].

¹⁶¹ *Id.*

¹⁶² *Id.*

¹⁶³ Ying was charged in 2021 but has been in China since 2019. *Id.*

¹⁶⁴ *Former Los Alamos Physicist Gets Probation for Failing to Disclose China Ties*, SCI. (Sept. 17, 2020), <https://www.science.org/content/article/former-los-alamos-physicist-gets-probation-failing-disclose-china-ties> [<https://perma.cc/WL4E-TFST>] [hereinafter *Former Los Alamos Physicist*].

¹⁶⁵ *Id.*

¹⁶⁶ Press Release, Stanford Researcher, *supra* note 158.

¹⁶⁷ Press Release, Off. of Pub. Affs., U.S. Dep’t of Just., Chinese National Sentenced for Economic Espionage Conspiracy (Apr. 7, 2022).

proprietary information concerning “Nutrient Optimizer” technology with him to China.¹⁶⁸

Zhengkun Chen is an example of the fourth category, a private businessperson indicted for improper foreign involvement. Chen was General Manager and Chair of Rexchip Electronic Corporation, which Micron acquired.¹⁶⁹ Chen became the site director of Micron’s Taiwanese subsidiary’s fabrication facility, responsible for making Micron’s 25nm DRAM chip.¹⁷⁰ Chen resigned from Micron and began working for another Taiwanese company.¹⁷¹ The U.S. government charged Chen with conspiring to steal trade secrets from Micron related to its DRAM chip technology.¹⁷²

Table 2 shows the occurrences of each category of domestic actor.

Table 2. Occurrences of Each Category of Domestic Actor. Credit: Walker Smith & Pilz

Position of the Domestic Actor	Number of Cases
University/Institute faculty	16
PhD Student, post-doc, non-faculty university researcher	9
Private researcher	14
Entrepreneur or businessperson	1

As shown, a majority of the cases (twenty-five of forty) involved a domestic actor at a U.S. university, as either a faculty member, student, or researcher. We

¹⁶⁸ Xiang entered into a plea agreement. *Id.* An ongoing appeal is addressing the warrantless seizure and search of his electronic devices by border officials. *See* United States v. Xiang, No. 22-1801, 2023 WL 3263857 (8th Cir. May 5, 2023); *see also* United States v. Xiang, REPS. COMM., <https://www.rcfp.org/briefs-comments/united-states-v-xiang/> [<https://perma.cc/RAA2-GY5U>] (last visited May 15, 2023).

¹⁶⁹ Indictment ¶ 7, United States v. United Microelectronics Corp., No. 3:18-CR-00465 (N.D. Cal. Sept. 27, 2018).

¹⁷⁰ *Id.*

¹⁷¹ *Id.*

¹⁷² *Id.* ¶ 51. The criminal case is ongoing, with a bench trial scheduled for August 2023; *see also supra* text accompany notes 152–54.

discuss below the implications for universities, who have been awkwardly placed between funding agencies and their faculty.

3. Affiliation Between the Foreign and Domestic Actors

The U.S. government's crackdown on improper foreign involvement targets foreign actors and domestic actors that affiliate through a variety of mechanisms, including:

1. Talent programs;
2. Talent programs along with private company employment;
3. Foreign university or research institute affiliation;
4. Private employment or company founder (outside of a talent program);
5. Investment;
6. Foreign military involvement; and
7. Arms-length contracts.

The prosecution of Cleveland Clinic researcher Qing Wang illustrates a domestic actor who allegedly affiliated with the Chinese government through a talent program.¹⁷³ The Thousand Talents Plan, announced by the Chinese government in 2008, has attracted more than 7,000 researchers.¹⁷⁴ Applicants first must obtain a position at a Chinese institution, then apply to the Thousand Talents Plan.¹⁷⁵ If accepted, participants receive a bonus of around \$150,000 and an opportunity to apply for a significant research fund.¹⁷⁶ Other incentives include housing subsidies, meal allowances, relocation assistance, and education subsidies.¹⁷⁷

¹⁷³ Press Release, Off. of Pub. Affs., U.S. Dep't of Just., Former Cleveland Clinic Employee and Chinese "Thousand Talents" Participant Arrested for Wire Fraud (May 14, 2020). Wang's case was voluntarily dismissed without prejudice. *Qing Wang* 王擎, APA JUST., <https://www.apajustice.org/qing-wang.html> [https://perma.cc/6A8H-9KHN] (last visited May 15, 2023).

¹⁷⁴ Hepeng Jia, *What Is China's Thousand Talents Plan?*, NATUREJOBS CAREER GUIDE, <https://media.nature.com/original/magazine-assets/d41586-018-00538-z/d41586-018-00538-z.pdf> [https://perma.cc/B52A-4FFC] (last visited Feb. 13, 2023).

¹⁷⁵ *Id.*

¹⁷⁶ *Id.*

¹⁷⁷ *Id.*

While China’s government argues that these programs are intended to promote international cooperation in science and are therefore similar to the programs of other countries,¹⁷⁸ the U.S. government argues that the plan,

incentivizes individuals engaged in research and development in the United States to transmit the knowledge and research they gain here to China in exchange for salaries, research funding, lab space, and other incentives. China unfairly uses the American research and expertise it obtains for its own economic and military gain.¹⁷⁹

The second category of affiliation includes domestic actors who affiliated with a foreign actor through a talent program, but also had employment with a foreign entity outside of the talent program. The prosecution of Zhengdong Cheng, a Texas A&M and NASA researcher, is an example of this second category.¹⁸⁰ The government alleged that Cheng was a member of the Hundred Talents Plan and the River Talent Plan.¹⁸¹ In addition to his participation in these talent plans, Cheng also formed a Chinese entity, Foshan City Ge Wei Technology Co., Ltd.¹⁸²

The third category of affiliation involves a domestic actor having an appointment at a foreign university or research institute, but not involving a talent plan. An example of this form of affiliation is the prosecution of Mingqing Xiao, a professor at Southern Illinois University.¹⁸³ Xiao allegedly also had an appointment at ShenZhen University, a public university in GuanDong province in China.¹⁸⁴

¹⁷⁸ Ellen Barry & Gina Kolata, *China’s Lavish Funds Lured U.S. Scientists. What Did It Get in Return?* (Feb. 7, 2020), <https://www.nytimes.com/2020/02/06/us/chinas-lavish-funds-lured-us-scientists-what-did-it-get-in-return.html> [https://perma.cc/B3FW-D65F].

¹⁷⁹ STAFF OF S. PERMANENT SUBCOMM. ON INVESTIGATIONS, 116TH CONG., THREATS TO THE U.S. RESEARCH ENTERPRISE: CHINA’S TALENT RECRUITMENT PLANS (2019).

¹⁸⁰ Criminal Complaint ¶ 9, *United States v. Cheng*, No. 4:20-mj-1511 (S.D. Tex. Aug. 20, 2020).

¹⁸¹ *Id.* ¶ 11.

¹⁸² *Id.* ¶ 12. Ultimately, Cheng entered into a plea agreement and was sentenced to time served plus about \$107,000 in fines and restitution.

¹⁸³ Press Release, Off. of Pub. Affs., U.S. Dep’t of Just., Mathematics Professor and University Researcher Indicted for Grant Fraud (Apr. 21, 2021).

¹⁸⁴ *Id.*

Through that appointment, Xiao allegedly received research funding from the National Science Foundation of China.¹⁸⁵

The prosecution of Apple employee Xiaolang Zhang illustrates a fourth category of affiliation where the domestic actor finds or takes employment with a foreign private company.¹⁸⁶ Zhang left Apple to work for X-Motors, a company headquartered in China that aims to bring electric and automated vehicle technology to market.¹⁸⁷

In a fifth type of affiliation, the domestic actor receives investment from the foreign actor. For example, in the prosecution of Chi Lung Winsman Ng, the accused allegedly worked with a GE engineer to take GE trade secrets and attempted to procure foreign investment to commercialize those trade secrets in China.¹⁸⁸

An example of the sixth category of affiliation, military involvement, is the prosecution of UCLA researcher Guan Lei. Lei allegedly had an affiliation with the People's Liberation Army in China and failed to disclose that affiliation on a visa application.¹⁸⁹

In a seventh category of affiliation, the domestic actor enters into arms-length contracts with foreign actors. For example, the government charged Walter Liew with procuring DuPont's trade secrets and contracting with Chinese entities to transfer those trade secrets.¹⁹⁰

Table 3 shows the occurrences of each category of affiliation between the foreign and domestic actors.

¹⁸⁵ *Id.* Xiao was convicted and sentenced; the case is on appeal. *United States v. MingXing Xiao*, No. 22-2758 (7th Cir. filed Oct. 4, 2022).

¹⁸⁶ Press Release, U.S. Atty's Off. N. Dist. Cal., U.S. Dep't of Just., Former Apple Employee Indicted on Theft of Trade Secrets (July 16, 2018).

¹⁸⁷ *Id.* As of April 2023, this case is still pending. Xiaolang Zhang pled guilty in August 2022 to theft of trade secrets and appears to be still awaiting a status hearing regarding sentencing.

¹⁸⁸ Press Release, Off. of Pub. Affs., U.S. Dep't of Just., Chinese Businessman Charged with Conspiring to Steal Trade Secrets (Feb. 26, 2021) [hereinafter Press Release, Chinese Businessman]. Ng had not been arrested at the time of his indictment. *See id.*

¹⁸⁹ Press Release, U.S. Atty's Off. Cent. Dist. Cal., U.S. Dep't of Just., Chinese National Charged with Destroying Hard Drive During FBI Investigation into the Possible Transfer of Sensitive Software to China (Aug. 28, 2020). The United States ultimately dropped the charges against Lei.

¹⁹⁰ Press Release, U.S. Atty's Off. N. Dist. Cal., U.S. Dep't of Just., Walter Liew Sentenced to Fifteen Years in Prison for Economic Espionage (July 11, 2014). Liew was convicted, sentenced, and eventually granted compassionate release into home confinement on account of the pandemic. *United States v. Liew*, 466 F. Supp. 3d 1062 (N.D. Cal. 2020).

Table 3. Occurrences of Each Category of Affiliation Between the Foreign and Domestic Actors. Credit: Walker Smith & Pilz

Affiliation Between Foreign and Domestic Actor	Number of Cases
Talent programs	11
Talent programs + private employment	5
Foreign university or institute affiliation	3
Private employment or founder (no talent program)	12
Investment	1
Military affiliation	6
Arms-length contracts	2

Given that talent programs have been repeatedly emphasized as a concern for the U.S. government,¹⁹¹ it is not surprising that sixteen of the forty cases involve a foreign actor engaging a domestic actor via a talent program. Nonetheless, our taxonomy shows a relatively wide distribution of mechanisms allegedly used by foreign actors to engage with domestic actors.

4. Nature of the Domestic Actor’s Alleged Actions

Domestic actors prosecuted under the “China Initiative” are generally accused of some domestic action or omission in connection with their alleged foreign interaction, including:

1. Affiliation without any improper possession or transfer of proprietary information,

¹⁹¹ *E.g.*, Mitch Ambrose, *Congress Tightening Screws on Foreign Talent Programs*, AM. INST. PHYSICS (Sept. 30, 2021), <https://www.aip.org/fyi/2022/congress-tightening-screws-foreign-talent-programs> [<https://perma.cc/FZA4-TM9N>] (“Last week, the House attached a provision to its version of Congress’ annual National Defense Authorization Act (NDAA) that would bar recipients of federal research grants from participating in ‘malign’ talent recruitment programs based in ‘countries of concern.’”).

2. Improper possession of proprietary information without actual transfer, and
3. Possession and actual transfer of proprietary information.

The prosecution of Charles Lieber, a professor and department chair at Harvard, illustrates the first category. The Department of Justice alleged that Lieber was a participant in China's Thousand Talents Plan, that he failed to disclose his participation in this program, and that he subsequently lied to federal investigators about his participation.¹⁹² Lieber had received more than \$15 million in federal funding from the National Institutes of Health and the Department of Defense.¹⁹³ These grants required him, as principal investigator, to disclose significant foreign financial conflicts of interest such as financial support from foreign entities.¹⁹⁴

The prosecution of Zaosong Zheng, a medical researcher in Boston, illustrates the alleged procurement of proprietary information from a domestic source with the demonstrated intent to transfer that information to a foreign actor. According to the U.S. government, Zheng was interdicted in Boston's airport before his flight to China with twenty-one improperly labeled vials of biological specimens from his employer.¹⁹⁵ He allegedly admitted that he was planning to take the specimens to China to conduct further research and publish the results under his own name.¹⁹⁶

The prosecution of Xiaorong You for conspiracy to commit trade secret theft, conspiracy to commit economic espionage, possession of stolen trade secrets, economic espionage, and wire fraud illustrates the actual transfer of proprietary technology or information to a foreign source.¹⁹⁷ While employed as a chemist at the Coca-Cola Company and Eastman Chemical Company, You allegedly stole trade

¹⁹² Press Release, Off. of Pub. Affs., U.S. Dep't of Just., Harvard University Professor Indicted on False Statement Charges (June 9, 2020). Charles Lieber was convicted and, in April 2023, sentenced to six months of house arrest. *United States v. Lieber*, No. 1:20-CR-10111 (D. Mass. verdict submitted Dec. 21, 2021); Chloe Kim, *Ex-Harvard Professor Charles Lieber Gets House Arrest over China Ties*, BBC NEWS (Apr. 26, 2021), <https://www.bbc.com/news/world-us-canada-65402979> [<https://perma.cc/TAD5-P625>].

¹⁹³ *Id.*

¹⁹⁴ *Id.*

¹⁹⁵ Indictment ¶¶ 6–7, *United States v. Zheng*, 2020 WL 1514605 (D. Mass. Jan. 21, 2020) (No. 20-10015).

¹⁹⁶ *Id.* ¶ 9.

¹⁹⁷ Press Release, Off. of Pub. Affs., U.S. Dep't of Just., Ph.D. Chemist Convicted of Conspiracy to Steal Trade Secrets, Economic Espionage, Theft of Trade Secrets and Wire Fraud (Apr. 22, 2021).

secrets related to BPA-free coatings for the inside of beverage cans to benefit the Chinese company he had established.¹⁹⁸ Because You was, himself, affiliated with the new Chinese company, we categorized this as an actual transfer of proprietary information once You had allegedly procured the proprietary information and used it for an improper purpose.

Table 4 shows the occurrences of each category of the nature of the domestic actor’s actions.

Table 4. Occurrences of Each Category of the Nature of the Domestic Actor’s Actions. Credit: Walker Smith & Pilz

Nature of the Domestic Actor’s Actions	Number of Cases
Affiliation without improper possession	16
Improper possession and demonstrated intent to transfer	13
Possession and actual transfer of IP	11

Perhaps a bit surprisingly, the most common category was “affiliation without improper possession or transfer,” meaning that the domestic actor had an allegedly improper affiliation with a foreign entity but was *not* alleged to have improperly acquired any proprietary information, let alone have transferred that proprietary information to the foreign actor.

5. Alleged Culpability of the Domestic Actor

Domestic actors might commit the acts or omissions described above wholly intentionally, wholly innocently, or somewhere in between.¹⁹⁹ As with the other aspects of our taxonomy, it is important to recognize that allegations may not correspond with or fully reflect the facts of a particular case. On one hand, a

¹⁹⁸ You was convicted and sentenced. *Id.* The case is on appeal; the defense argues that the trial was tainted by anti-Chinese prejudice, including a witness’s statement that he “didn’t trust the Chinese,” which the government argues was in reference to China’s government. *United States v. You*, No. 22-5442 (6th Cir. filed 2022).

¹⁹⁹ *Cf.* Zoe M. King et al., *Characterizing and Measuring Maliciousness for Cybersecurity Risk Assessment*, *FRONTIERS IN PSYCHOL.*, Feb. 5, 2018, at 1, 3 (describing a spectrum that combines both the level of benevolence or malevolence and the level of competence or incompetence, with “benevolent competent” presenting the least human risk and “malevolent competent” presenting the most).

defendant may have done nothing wrong (or indeed nothing at all). On the other hand, a defendant may have intended much more than a prosecutor can prove. With these caveats, the alleged culpability could entail:

1. Administrative sloppiness,
2. Lying to authorities after original incident,
3. Other circumstantial evidence of intent (other than lying to authorities), and
4. Demonstrated intent/malfeasance.²⁰⁰

The indictment of University of Florida Professor Lin Yang illustrates potential administrative sloppiness. The indictment alleges that Yang participated in China's Thousand Talents Plan²⁰¹ and established a Chinese company known as Deep Informatics²⁰² but failed to disclose these affiliations on a grant application to the NIH.²⁰³ However, Yang's indictment does not allege that he improperly procured or transferred proprietary information.²⁰⁴

The term "administrative sloppiness" admittedly assumes the best of intentions in a particular situation. While it is not possible to discern from the publicly available descriptions whether a failure to properly fill out paperwork was sloppiness or some more nefarious conduct, this label is used, in part, to make a point. Academics are notoriously bad at paperwork. In addition, concerns about the increased administrative burden on faculty has been well documented.²⁰⁵ This category allows for discussion about what other circumstances, if any, prompt the U.S. government

²⁰⁰ For an empirical study of the characteristics of malicious insiders, see Nan (Peter) Liang et al., *An Empirical Validation of Malicious Insider Characteristics*, 33 J. MGMT. INFO. SYS. 361 (2016); see also STEPHEN R. BAND ET AL., *COMPARING INSIDER IT SABOTAGE AND ESPIONAGE: A MODEL-BASED ANALYSIS* (2006).

²⁰¹ Indictment ¶¶ 9–11, *United States v. Lin Yang* (N.D. Fla. Feb. 3, 2021); see also Press Release, Former University of Florida Researcher, *supra* note 160.

²⁰² Indictment ¶ 12, *United States v. Lin Yang* (N.D. Fla. Feb. 3, 2021).

²⁰³ *Id.* ¶ 2.

²⁰⁴ *Id.*

²⁰⁵ Colleen Flaherty, *Streamlining 'Shadow Work,'* INSIDE HIGHER EDUC. (Nov. 8, 2016), <https://www.insidehighered.com/news/2016/11/08/cornell-launches-effort-cut-administrative-red-tape-starting-shadow-work> [https://perma.cc/X4F5-SG8Y].

to infer that a failure to properly fill out paperwork involves criminal intent as compared to noncriminal sloppiness.

In fact, the government recognizes the exposure of academics, in particular, to criminal charges based on administrative “impurity.”²⁰⁶ A former special agent for the FBI explained that there was a saying at the FBI that “nobody’s administratively pure—that if you look hard enough, you’ll find some mistakes somebody’s made on some government document.”²⁰⁷

The indictment of Charles Lieber, discussed previously,²⁰⁸ illustrates alleged lying to authorities after an original failure to disclose. According to the indictment, Lieber failed to disclose his foreign affiliations on grant applications and then lied about these affiliations to investigators from the Department of Defense.²⁰⁹

The indictment of Ohio State University Professor Song Guo Zheng illustrates the alleged combination of an initial failure to disclose and circumstantial evidence of intent beyond lying to authorities. Zheng allegedly failed to disclose on an NIH grant application his participation in China’s Thousand Talents Plan and his relationship with five Chinese institutions.²¹⁰ When arrested, Zheng was allegedly preparing to board a charter flight from Anchorage to China with three large bags, one small suitcase, and a briefcase containing two laptops, three cell phones, several USB drives, several silver bars, expired Chinese passports for his family, and deeds for property in China.²¹¹

Finally, the indictment of Chi Lung Winsman Ng illustrates the alleged combination of an initial transgression and then direct evidence of intent to transfer information to a foreign actor. Ng, a Chinese businessperson, allegedly conspired with a GE engineer to steal trade secrets and other proprietary information from GE

²⁰⁶ Colleen Flaherty, *A Verdict, but No Clear Victory, for the China Initiative*, INSIDE HIGHER EDUC. (Apr. 11, 2022), <https://www.insidehighered.com/news/2022/04/11/jury-finds-chinese-u-kansas-professor-guilty-fraud> [<https://perma.cc/3JM3-3PNF>] [hereinafter Flaherty, *A Verdict, but No Clear Victory, for the China Initiative*].

²⁰⁷ *Id.*

²⁰⁸ See *supra* text accompany notes 195–97.

²⁰⁹ Indictment, *United States v. Lieber*, 2021 WL 5882566 (D. Mass. Dec. 13, 2021) (No. 20-10111).

²¹⁰ Press Release, Off. of Pub. Affs., U.S. Dep’t of Just., University Researcher Sentenced to Prison for Lying on Grant Applications to Develop Scientific Expertise for China (May 14, 2021).

²¹¹ *Id.* Zheng entered into a plea agreement, and the Sixth Circuit rejected his subsequent claim of ineffective assistance of counsel. *United States v. Zheng*, 27 F.4th 1239 (6th Cir. 2022).

and use them in a business plan provided to prospective investors.²¹² While Ng is not accused of transferring the trade secrets to others, he is accused of obtaining and using them for his own benefit in China.²¹³

Table 5 shows the occurrences of each category of alleged culpability of the domestic actor.

Table 5. Occurrences of Each Category of Alleged Culpability of the Domestic Actor. Credit: Walker Smith & Pilze

Alleged Culpability of the Domestic Actor	Number of Cases
Administrative sloppiness	14
Circumstantial evidence of intent (i.e., lying to authorities)	3
Circumstantial evidence of intent (i.e., more than lying to authorities)	7
Demonstrated intent/malfeasance	16

As shown, the most common categories were at the far ends of the culpability spectrum, with fourteen cases of mere “administrative sloppiness” and sixteen cases of “demonstrated intent or malfeasance.”

6. Nationality and Residency Status of the Domestic Actor

We also categorized federal prosecutions of alleged improper foreign involvement according to the nationality and residency status of the domestic actor. The domestic actors in the cases we reviewed fell into the following categories:

1. A naturalized U.S. citizen who was formerly a citizen of the People’s Republic of China,
2. A naturalized U.S. citizen who was formerly a citizen of a country other than the People’s Republic of China,
3. A U.S. citizen at birth,

²¹² *Id.*

²¹³ Press Release, Chinese Businessman, *supra* note 188.

4. A U.S. permanent resident who is a citizen of the People’s Republic of China,
5. A U.S. permanent resident who is a citizen of a country other than the People’s Republic of China,
6. A non-permanent resident of the United States, and
7. Unknown.

The prosecution of Walter Liew, the former DuPont researcher, is an example of an accused naturalized U.S. citizen who was formerly a citizen of the People’s Republic of China.²¹⁴ The second category includes Turab Lookman, the former Los Alamos researcher, who is a naturalized U.S. citizen and formerly a citizen of India.²¹⁵ James Patrick Lewis, a former West Virginia professor sentenced for fraud, represents the third category, a U.S. citizen by birth.²¹⁶ The former University of Florida Professor, Lin Yang, illustrates the fourth category, a U.S. permanent resident who is a national of the People’s Republic of China.²¹⁷ Chi Lung Winsman Ng, the business person accused of stealing trade secrets from GE, is included in the fifth category, a U.S. permanent resident from a country other than the People’s Republic of China.²¹⁸ The sixth category, individuals who are not permanent residents or citizens of the United States, includes University of Tennessee Professor Anming Hu, a Canadian citizen originally from the People’s Republic of China.²¹⁹ Lastly, the nationality and residency status of some of the accused could not be identified from publicly available records.

Table 6 shows the occurrences of each category of nationality/residency of the domestic actor.

²¹⁴ Press Release, Off. of Pub Affs., U.S. Dep’t of Just., U.S. and Chinese Defendants Charged with Economic Espionage and Theft of Trade Secrets in Connection with Conspiracy to Sell Trade Secrets to Chinese Companies (Feb. 8, 2012).

²¹⁵ *Former Los Alamos Physicist*, *supra* note 164.

²¹⁶ Press Release, U.S. Att’y’s Off. N. Dist. W. Va., U.S. Dep’t of Just., Former West Virginia University Professor Sentenced for Fraud that Enabled Him to Participate in the People’s Republic of China’s “Thousand Talents Plan” (July 30, 2020).

²¹⁷ Press Release, Former University of Florida Researcher, *supra* note 160.

²¹⁸ Press Release, Chinese Businessman, *supra* note 188.

²¹⁹ Jamie Satterfield, *Former UT Professor Falsely Accused of Spying Demands to Know Whether He’ll Be Tried Again*, KNOXNEWS (July 8, 2021, 10:40 AM), <https://www.knoxnews.com/story/news/crime/2021/07/08/ex-tennessee-professor-falsely-accused-espionage-wants-new-trial-decision/7892723002/> [https://perma.cc/CD7E-NG3D].

Table 6. Occurrences of Each Category of Nationality/Residency of the Domestic Actor. Credit: Walker Smith & Pilz

Nationality/Residency of the Domestic Actor	Number of Cases
Naturalized U.S. citizen (formerly PRC)	11
Naturalized U.S. citizen (formerly a country other than PRC)	3
U.S. Citizen by birth	2
U.S. permanent resident—PRC national	15
U.S. permanent resident—national of non-PRC country	4
Other national	1
Unknown	4

Not surprisingly, given the stated focus of the “China Initiative” on the People’s Republic of China, twenty-six of the forty cases involved a domestic actor who was either a naturalized U.S. citizen from the PRC or a U.S permanent resident from the PRC.

7. Ethnicity of the Domestic Actor

Our taxonomies for the ethnicity of the domestic actor included:

1. Asian,
2. Caucasian,
3. Other, and
4. Unknown.

In some cases, we inferred Asian ethnicity from a Chinese name. As shown in Table 7, the vast majority of cases in our taxonomy involved a domestic actor of Asian ethnicity.

Table 7. Ethnicity of Domestic Actor. Credit: Walker Smith & Pilz

Ethnicity of Domestic Actor	Number of Cases
Asian	38
Caucasian	2

8. Status of the Case

We also categorized the status of the case as of May of 2022. As discussed further below in the “Summary of Our Analysis” section, this allowed us to seek correlations to outcomes. Table 8 shows occurrences of the categories of case status.

Table 8. Occurrences of the Categories of Case Status. Credit: Walker Smith & Pilz

Case Status	Number of Cases
Dismissed	7
Acquitted	1
Convicted	7
Plea Bargain	14
Ongoing	11

There are several noteworthy aspects to this data. First, eight of the forty cases have already resulted in dismissals or acquittals. This 20% rate of acquittals/dismissals is more than double the 8% rate of acquittals/dismissals for all federal criminal defendants in recently reported data.²²⁰ With eleven cases still

²²⁰ John Gramlich, *Only 2% of Federal Criminal Defendants Go to Trial, and Most Who Do Are Found Guilty*, PEW RSCH. CTR. (June 11, 2019), <https://www.pewresearch.org/fact-tank/2019/06/11/only-2-of-federal-criminal-defendants-go-to-trial-and-most-who-do-are-found-guilty/#:~:text=Nearly%2080%2C000%20people%20were%20defendants,collected%20by%20the%20federal%20judiciary> [https://perma.cc/XJA3-L8RZ].

ongoing, this percentage may still increase. In other words, the government's "China Initiative" is significantly less successful at obtaining convictions or guilty pleas as compared to the federal government's criminal prosecutions in other subject matters.

Several of these acquittals or convictions have been extremely high profile. We previously discussed the acquittal of University of Tennessee Professor Anning Hu. An example of a high-profile dismissal involves well-known MIT Engineering Professor, Gang Chen, whose case has been referred to as "among the most visible of the China Initiative."²²¹ Chen was arrested in January 2021 and charged with failing to disclose affiliations with Chinese government institutions on a Department of Energy grant application.²²² Just over a year later, the U.S. government determined that Chen had no obligation to disclose these affiliations and moved to dismiss his charges.²²³

Although they are occurring well below the U.S. government's average across all federal criminal cases, prosecutors have achieved convictions and guilty pleas. Seven of the forty cases have resulted in jury convictions and fourteen of the accused have pleaded guilty. These jury convictions include the highly publicized case of University of Kansas Professor Feng Tao. In April 2022, a jury convicted Tao on three counts of wire fraud and one count of false statements for concealing employment by a government-affiliated university in China.²²⁴ Tao initially faced up to twenty years in federal prison and a fine of \$250,000 for wire fraud and up to ten years and a fine up to \$250,000 on each of the program fraud counts.²²⁵ However, the trial judge overturned Tao's three convictions on wire fraud and on the remaining count sentenced him to time already served.²²⁶

Another noteworthy aspect of this data is that eight of the forty cases have gone to trial, far outpacing the 2% of all federal criminal cases that went to trial from

²²¹ Ellen Barry & Katie Benner, *U.S. Drops Its Case Against M.I.T. Scientist Accused of Hiding China Links*, N.Y. TIMES (Jan. 20, 2022), <https://www.nytimes.com/2022/01/20/science/gang-chen-mit-china-initiative.html> [https://perma.cc/SLK7-FZWG].

²²² *Id.*

²²³ *Id.*

²²⁴ Press Release, Off. of Pub. Affs., U.S. Dep't of Just., Jury Convicts University of Kansas Researcher for Hiding Ties to Chinese Government (Apr. 7, 2022) [hereinafter Press Release, University of Kansas Researcher].

²²⁵ *Id.*

²²⁶ Neil Savage, *US Chemical Engineer Avoids Prison After Conviction for Hiding Ties to China*, NATURE (Jan. 19, 2023), <https://www.nature.com/articles/d41586-023-00122-0>.

recently reported data.²²⁷ There are a few possible reasons for this. First, it is possible that the government’s improper foreign interaction cases are weaker than their other cases and, therefore, defendants are less inclined to take a plea agreement. Second, it is possible that due to the highly publicized nature of the government’s “China Initiative,” prosecutors may be less inclined to offer acceptable plea arrangements. Third, due to the highly publicized nature of the cases, defendants may be more inclined to vigorously fight the charges through trial.

C. *Summary of Our Analysis*

We originally suspected that we would find correlations between certain categories and the outcomes reflected in the case status category. In order to examine these potential correlations, we generated pivot tables associating each taxonomy to the status categories. However, we found no striking correlations.

It was noteworthy that sixteen of the forty cases involved domestic actors whose actions merely amounted to an affiliation with a foreign entity, without any improper possession or transfer of proprietary information. Additionally, fourteen of the forty cases involved domestic actors whose culpability we classified as “administrative sloppiness.” In other words, there was not any circumstantial or direct evidence of these domestic actors’ intent to transfer intellectual property to a foreign actor.

Focusing on these two categories—“nature of the domestic actor’s actions” and “alleged culpability of the domestic actor”—we found that twelve of the forty cases involved both “affiliation without improper possession/transfer” (for the nature of the domestic actor’s actions taxonomy) and “administrative sloppiness” (for the “alleged culpability of the domestic actor” taxonomy). We will call this the “affiliation-administrative sloppiness subset.” Looking solely at these twelve affiliation-administrative sloppiness cases, we summarized the results in Table 9.

²²⁷ Gramlich, *supra* note 220.

Table 9. Summary of Twelve Affiliation–Administrative Sloppiness Cases. Credit: Walker Smith & Pilz

Cases with Both “Affiliation Without Improper Possession/Transfer” and “Administrative Sloppiness” Categorizations					
Identity of the foreign actor	Position of the domestic actor	Affiliation between foreign and domestic actor	Nationality or residency status of the domestic actor	Ethnicity of the domestic actor	Status (as of 5/11/22)
11—foreign government 1—foreign university	11—university or institute faculty 1—PhD student; post-doc; researcher	8—talent program 1—talent program + private employment 2—university or institute affiliation 1—military participation	6—naturalized U.S. citizen (PRC) 1—naturalized U.S. citizen (non-PRC) 1—U.S. citizen at birth 2—U.S. perm. res. (PRC) 1—other nat’l 1—unknown	11—Asian 1—Caucasian	3—dismissal 1—acquittal 2—convicted 5—plea 1—ongoing

Of note, all of the affiliation-administrative sloppiness cases involve a foreign government or foreign university as a foreign actor. Also, all of the affiliation-administrative sloppiness cases involve a domestic actor at a U.S. university. Said differently, in the forty cases we reviewed, there was not a single case brought against a non-university researcher for mere affiliation with a foreign entity which the researcher failed to disclose.

In terms of the case status, a third of the twelve affiliation-administrative sloppiness cases have resulted in acquittals or dismissals. This far exceeds the 20% of dismissals/acquittals across the forty cases we reviewed and the 8% of dismissals/acquittals across all federal criminal cases from recently reported data.²²⁸

²²⁸ *Id.*

This low conviction rate is not surprising. The Department of Justice’s stated focus of the “China Initiative” was “trade secret theft, hacking, and economic espionage.”²²⁹ A category of cases where the defendant did not improperly obtain or transfer intellectual property and whose alleged culpability amounted to “administrative sloppiness” seems to fall short of most definitions of trade secret theft, hacking, and economic espionage.

These affiliation-administrative sloppiness cases have occurred solely at U.S. universities. To further examine the significance of the university versus private sector distinction for domestic actors, we created pivot tables for domestic actors in the private sector. We first looked at the “Nature of the Domestic Actor’s Actions” category for private sector domestic actors.

Table 10. Nature of the Domestic Actor’s Actions in the Private Sector. Credit: Walker Smith & Pilz

Nature of the Domestic Actor’s Actions in the Private Sector	Number of Cases
Affiliation without improper possession/transfer	0
Demonstrated intent to transfer	8
Actual transfer	7

As shown in Table 10, in all fifteen cases involving a private sector domestic actor, the domestic actor had not only accessed proprietary information, but also demonstrated an intent to transfer, or actually transferred, the information to the foreign actor.

We next looked at the “Alleged Culpability of the Domestic Actor” category for private sector domestic actors.

²²⁹ Press Release, Sessions, *supra* note 127.

Table 11. Alleged Culpability of the Domestic Actor in the Private Sector. Credit: Walker Smith & Pilz

Alleged Culpability of the Domestic Actor in the Private Sector	Number of Cases
Administrative sloppiness	0
Circumstantial evidence of intent (i.e., lying to authorities)	0
Circumstantial evidence of intent (i.e., more than lying to authorities)	4
Demonstrated intent/malfeasance	11

As shown in Table 11, in all fifteen cases involving a private sector domestic actor, there existed either demonstrated intent or malfeasance (in eleven of fifteen cases) or circumstantial evidence of intent beyond lying to authorities (in four of fifteen cases).

The difference in the domestic activity and alleged culpability as between domestic university actors and domestic private sectors is striking. This aligns with some of the comments we received from both researchers and university research commercialization professionals. These individuals felt that the federal government, in presentations or conversations, was pointing to examples from the private sector, and not universities, when discussing the risks of espionage or trade secret theft stemming from improper foreign interactions. In particular, one of the authors recalled a presentation by the FBI at an academic research commercialization conference. What stood out were that most of the examples of wrongdoing appeared to involve private domestic actors. Several university research commercialization professionals in attendance commented that they did not understand how the examples involving private companies (and what appeared to be significant culpability) related to the university setting.

Indeed, based on our taxonomies, the rhetoric and concern about espionage and trade secret theft appears to apply more appropriately to domestic actors in the private sector. On the other hand, improper foreign interaction situations involving domestic actors at universities concern alleged failures to disclose foreign affiliations, but generally do not appear to rise to the level of espionage or trade secret misappropriation.

V. BROADER IMPACTS OF THE CRACKDOWN

A. Direct Impacts

The government’s crackdown on alleged foreign interaction has had a direct and highly public impact. The forty prosecutions analyzed in this Article include twenty-one guilty pleas or convictions, eight acquittals or dismissals, and eleven ongoing cases. For those convicted, or pleading guilty, the cost can be steep. Although University of Kansas Professor Feng Tao was ultimately sentenced to time already served, his original convictions could have resulted in decades of prison time.²³⁰

Tao’s case, where the federal government—despite the stated focus of the China Initiative on “espionage”—does not bring charges of espionage, is not alone. The *MIT Technology Review* conducted a study of seventy-seven federal cases and found that only nineteen of them actually involved charges under the Economic Espionage Act.²³¹ Tao’s attorney, Peter Zeidenberg, confirmed this pattern.²³² In a recent *Inside Higher Ed* article, Zeidenberg, who has represented dozens of clients implicated by the China Initiative, said the federal government is “criminalizing a failure to disclose perfectly lawful activity. All the activity [Tao is] alleged to have engaged in and kept in China was all lawful; none of it [is] prohibited.”²³³

For those prosecuted and then exonerated, the government crackdown has also had a significant impact. As explained by MIT’s Chen:

My family lived in fear for 2 years, and members of my research group relocated. The accusations against me were absurd. They criminalized routine professional activities: reviewing research proposals, writing recommendations, and hosting visiting scientists. In January 2022, the U.S. Department of Justice dropped all charges.²³⁴

²³⁰ See *supra* notes 224–26.

²³¹ Guo et al., *We Built a Database to Understand the China Initiative*, *supra* note 130.

²³² Flaherty, *A Verdict, but No Clear Victory, for the China Initiative*, *supra* note 206.

²³³ *Id.*

²³⁴ Gang Chen, *We Are All Gang Chen*, 375 *SCI.* 797 (Feb. 24, 2022), <https://www.science.org/doi/10.1126/science.abo6697>.

The cases in which the federal government has brought charges, however, are only the tip of the iceberg. A far greater number of U.S.-based university researchers have received significant non-criminal penalties from federal agencies or their own universities. As of July 2021, NIH has initiated investigations against 214 scientists at ninety-three institutions.²³⁵ Over 90% of those cases involve the People's Republic of China.²³⁶ Seventy-nine cases resulted in employment separations, and another thirty-nine cases resulted in a bar on NIH funding support.²³⁷ Given that the Department of Justice had identified less than forty prosecutions on its "China Initiative" website, and those cases involved more than just NIH actions, it is likely that as of July 2021, more than fifty university researchers had lost their jobs due to alleged improper foreign interactions, even though no criminal charges were brought.

One of the few publicized examples of a faculty member investigated by a federal agency but not criminally charged took place at Yale University. Haifan Lin is a professor of cell biology and Director of Yale's Stem Cell Center. NIH initiated an investigation of Lin in 2019 regarding the "sufficiency of reporting outside support."²³⁸ The Department of Justice initiated its own investigation at least as early as July 2020.²³⁹ Yale suspended Lin in January 2022, initiating its own internal investigation.²⁴⁰ After the Department of Justice dropped its investigation in April 2022, Yale reinstated Lin.²⁴¹

Many university researchers have been penalized by their institutions, receiving research bans or even losing their jobs. Yale Professor Yu He, a co-organizer of a letter to the DOJ signed by over 100 Yale faculty, told the *Yale News* "[the China

²³⁵ MICHAEL LAUER, DEP'T OF HEALTH & HUM. SERVS., FOREIGN INTERFERENCE IN NATIONAL INSTITUTES OF HEALTH FUNDING AND GRANT MAKING PROCESSES: A SUMMARY OF FINDINGS FROM 2016 TO 2021 (2021).

²³⁶ *Id.*

²³⁷ *Id.*

²³⁸ Isaac Yu, *Department of Justice Drops Investigation Against Haifan Lin*, YALE DAILY NEWS (Apr. 1, 2022, 12:43 AM), <https://yaledailynews.com/blog/2022/04/01/departement-of-justice-drops-investigation-against-haifan-lin%E2%82%AC%82%BC/> [<https://perma.cc/RN75-HBHZ>].

²³⁹ *Id.*

²⁴⁰ Isaac Yu, *Haifan Lin Returns from Suspension, but Faculty Questions Remain*, YALE DAILY NEWS (Apr. 7, 2022, 1:44 AM), <https://yaledailynews.com/blog/2022/04/07/haifan-lin-returns-from-suspension-but-faculty-questions-remain%E2%82%AC%82%BC/> [<https://perma.cc/SCK6-JE9Q>].

²⁴¹ *Id.*

Initiative] has been silently taking funding away from faculty, all done beneath the table.”²⁴²

We spoke to one researcher, off the record, who had been barred from conducting research due to alleged improper foreign interactions. We also spoke to several research commercialization professionals who had direct contact with impacted researchers at their institutions. The consistent description of the direct impact to researchers penalized by their universities or federal agencies was “personally devastating.”

B. Indirect Impacts

Beyond the criminal prosecutions and the unpublicized punishment of researchers by universities and funding agencies, the crackdown on improper foreign influence also has indirect impacts.

Researchers, particularly Asian and Asian-American researchers, are scared. Two surveys confirm this. A survey conducted by the Committee of 100, a non-profit group of prominent Chinese Americans, surveyed over 2,000 U.S. scientists at eighty-three U.S. universities.²⁴³ Of respondents self-identifying as Chinese, 42% said they feel racially profiled by the U.S. government.²⁴⁴ Of Chinese respondents, 69% feel the U.S. government is exaggerating the problems with China.²⁴⁵

The University of Michigan Association of Chinese Professors conducted a survey that received 123 responses.²⁴⁶ Nearly two-thirds of respondents said they do not feel safe as a Chinese academic.²⁴⁷ That survey gave a glimpse of the crackdown on improper foreign influence beyond the criminal prosecutions. No University of Michigan researcher was identified in the forty criminal prosecutions surveyed in

²⁴² Isaac Yu, *DOJ Weighs China Initiative as Yale Faculty Sign onto Open Letter Calling for Its Dissolution*, YALE DAILY NEWS (Feb. 01, 2022, 1:55 AM), <https://yaledailynews.com/blog/2022/02/01/doj-weighs-china-initiative-as-yale-faculty-sign-onto-open-letter-calling-for-its-dissolution/> [https://perma.cc/69VH-R4XA].

²⁴³ *Extraordinary Chinese Americans*, COMM. OF 100, <https://www.committee100.org/> [https://perma.cc/6J35-KAVA] (last visited Aug. 30, 2022).

²⁴⁴ Jeffrey Mervis, *Two Surveys Document Harmful Impact of China Initiative on Researchers*, SCI. (Oct. 28, 2021), <https://www.science.org/content/article/two-surveys-document-harmful-impact-china-initiative-researchers> [https://perma.cc/6YLL-5JQB].

²⁴⁵ *Id.*

²⁴⁶ *Id.*

²⁴⁷ *Id.*

this Article.²⁴⁸ Nonetheless, 22 of 123 respondents indicated they had been questioned by university officials concerning alleged improper foreign interactions.²⁴⁹ Nine of 123 had been questioned by the FBI. And 5 of 123 had been questioned by a federal agency.²⁵⁰

One Chinese-American researcher, speaking off the record, indicated they did not respond to the University of Michigan survey out of concerns about voicing an opinion on this topic. According to this researcher, many Chinese-American researchers did not respond due to concerns about being unfairly targeted. According to this researcher, the survey does not reflect the full picture of the impact on Chinese and Chinese-American professors caused by the crackdown. This concern about simply providing anonymous survey responses was confirmed by University of Michigan Public Policy Professor Ann Lin, who fielded the ACP survey. In an article published in *Science*, Lin explained, “I’ve been doing surveys for 20 years, and I’ve never had anybody ask me—is this [survey] legit?”²⁵¹ Lin indicated she received ten of those inquiries for the ACP survey.²⁵²

The concern of U.S. scientists and researchers about being punished for speaking out on this issue was confirmed during the course of our work on this Article. We directly contacted over twenty defendants from the forty cases analyzed in this Article. These were the defendants for which we could find email addresses or LinkedIn profiles. We received only one response from this cohort, and that researcher redirected us to their attorney, who did not respond to multiple inquiries. We also reached out to dozens of other researchers at major research universities. Only two of those researchers responded, and no one agreed to talk on the record. According to one of those researchers, “the FBI is very active on this campus and racial profiling is definitely occurring.” Additionally, we contacted over a dozen research commercialization professionals at major research universities. These professionals confirmed that the researchers on their campus were reluctant to talk about their experiences with foreign interactions out of concerns about becoming a target. We also offered these and other potential contacts a means of engaging with us that would protect their anonymity; no one used it.

²⁴⁸ *Id.*

²⁴⁹ *Id.*

²⁵⁰ *Id.*

²⁵¹ *Id.*

²⁵² *Id.*

With criminal charges brought against twelve domestic actors who merely affiliated with a foreign entity (without improperly accessing or transferring intellectual property) and who simply failed to disclose that affiliation (without any other evidence of intent to engage in espionage or intellectual property theft), the researchers’ concerns are not misplaced.

The crackdown on alleged improper foreign interaction has clearly had a chilling effect on important innovation. As reported in the C-100 Survey, 24% of U.S.-based Chinese scientists reported ending collaboration with China in the past three years and canceling planned projects.²⁵³ Worse yet, U.S.-based researchers are considering leaving the country due to concerns about being inadvertently wrapped up in the government crackdown.²⁵⁴ The C-100 survey found that 42% of U.S.-based Chinese and Chinese-American faculty have considered taking a job in another country.²⁵⁵

Our conversations with researchers revealed acute chilling effects on innovation from the government crackdown. One researcher we spoke to off the record explained that their school’s tech transfer office was prepared to support them in launching multiple therapeutics startups based on composition-of-matter intellectual property generated in that researcher’s lab. The researcher indicated that they will not pursue those startups in the current environment. As explained by the researcher, it will not be possible to engage in the necessary partnerships, and the researcher will not take the personal risk of becoming embroiled in the government’s crackdown. In the words of this researcher: “My tech transfer office has identified multiple therapeutics startups that could be launched this year based on my research. However, in this environment, I will not go forward with these startups.”

C. Role of Universities and Other Institutions

Universities have a central role in the crackdown on alleged improper foreign interaction. It is true that universities may be incentivized to cooperate with the government’s crackdown in order to preserve the opportunity to receive future funding from federal funding agencies. At the same time, universities have long had a relationship with their faculty that is different from the typical employer-employee relationship. Nonetheless, the crackdown has pulled many universities into the enforcement game. Of NIH’s 214 investigations, fifty-six involved self-disclosures

²⁵³ *Id.*

²⁵⁴ *See id.*

²⁵⁵ *Id.*

from universities, seventy-five were law firm referrals, and eighty-three came from other sources (such as anonymous reports or NIH staff noticing discrepancies).²⁵⁶ *Nature* reported that in some cases, universities have established closer ties with the FBI to cooperate with investigations into foreign influence.²⁵⁷ According to that publication, Washington State University, Oklahoma State University, and the University in North Texas have indicated they now have regular meetings with the FBI.²⁵⁸

This cooperation between universities and the federal government has come with some criticism. In fact, Lieber sued Harvard in October 2020 for its failure to indemnify him with respect to the criminal charges.²⁵⁹ According to the suit, “Harvard is cooperating with the United States attorney’s office in the prosecution of Professor Lieber. . . . It is disturbing that Harvard acted solely in its own self-interest by turning its back on a dedicated faculty member who suffers from a terminal illness and who is presumed innocent. More importantly, it is illegal.”²⁶⁰ *The New York Times* cited a former federal prosecutor who has consulted with universities regarding foreign influence investigations and who stated that he is not aware of a single situation in which a university continued to employ an accused researcher after a criminal trial.²⁶¹

Some concerns and confusion by faculty about the role of the university in addressing alleged improper foreign interaction were raised at a recent “town hall”

²⁵⁶ Lauer, *supra* note 54.

²⁵⁷ Nidhi Subbaraman, *Universities Are Forging Ties with the FBI as US Cracks Down on Foreign Influence*, NATURE (Mar. 20, 2020), <https://www.nature.com/articles/d41586-020-00646-9> [<https://perma.cc/2H25-B5GE>].

²⁵⁸ *Id.*

²⁵⁹ Ellen Berry, *Scientist Accused of Hiding Chinese Funds Sues Harvard, Saying It Abandoned Him*, N.Y. TIMES (Oct. 9, 2020), <https://www.nytimes.com/2020/10/09/us/charles-lieber-harvard-china.html> [<https://perma.cc/B6TW-GWC4>].

²⁶⁰ *Id.*

²⁶¹ As of December 2022, his faculty profile and research group page were still on Harvard’s website. *Charles Lieber*, HARV. UNIV. DEP’T CHEMISTRY & CHEM. BIOLOGY, <https://chemistry.harvard.edu/people/charles-lieber> (last visited Dec. 18, 2022); *see also Lieber Research Group*, HARV. UNIV., <https://web.archive.org/web/20221223222808/https://cml.harvard.edu/> (archived by Internet Archive on Dec. 25, 2022). These pages were subsequently restricted or removed.

at the University of Michigan.²⁶² Questions submitted in advance of the event raised concerns about:

- whether the university’s general counsel’s office will “indemnify” a faculty member in a federal investigation,
- whether, and to what extent, the university will cooperate with the FBI (for example turning over information without notifying a faculty member),
- for a faculty member with a nine-month appointment, to what extent does the university or a funding agency have any say over the three-months outside the appointment, and
- what support, if any, does a university provide to faculty to help make accurate disclosures to funding agencies.²⁶³

As a specific example of the concerns raised by faculty, it is common for faculty members to provide courtesy acknowledgements of support in publications. However, the federal agencies are using data analytics to identify potential inconsistencies in principal investigator disclosures. Accordingly, a researcher might make a courtesy acknowledgement of assistance from a foreign researcher or institution. If this foreign researcher or institution was not identified in a grant application disclosure as “other support,” a funding agency might initiate an investigation.

The researchers with whom we spoke perceive a significant difference in how universities support faculty subject to alleged improper foreign interaction inquiries. Researchers were particularly complimentary of MIT’s handling of the federal investigation of Professor Chen, noting that MIT continued to pay Chen’s salary and paid for his legal counsel. Chen mentioned this support in his op-ed: “What gave me hope and ultimately saved me is a lesson for all universities. MIT leadership, under President L. Rafael Reif, supported me morally and financially after I was detained at the airport, and the university made its support public soon after I was arrested.”²⁶⁴

²⁶² *International Engagement*, UNIV. MICH. RSCH., <https://research.umich.edu/research-at-michigan/international-engagement/> [<https://perma.cc/D548-3NE9>] (last visited Aug. 18, 2022).

²⁶³ *See id.*

²⁶⁴ Chen, *supra* note 234.

VI. TOWARD A MORE BALANCED APPROACH

Supporting the people who conduct and commercialize research is essential to protecting the culture of innovation on which universities and society at large depend. And yet past recommendations on innovation security have tended to view researchers more as potential threats to security than as potential sources of innovation.²⁶⁵ In this final section, we highlight recommendations—for the U.S. government, for universities and other institutions, and for individual researchers—intended to appropriately shift this balance toward these researchers and their research.

A. *Recommendations for the U.S. Government*

Our discussion of tools to combat improper foreign interaction identified just some of the many U.S. agencies that play a role in promoting or policing innovation. In a coordinated fashion, these actors should:

1. Appreciate the delicacy of the ecosystem around funded research, including commercialization and the negative impact that friction and uncertainty have downstream.²⁶⁶
2. More fully analyze both the costs and the benefits of rules and investigations, including their impacts on innovation and competitiveness through chilling effects and other unintended consequences.
3. Assess how stories in the United States will resonate internationally in a way that might justify other governments' repressive or nationalistic policies.

²⁶⁵ See, e.g., NIH ADVISORY COMM. TO THE DIR. (ACD), ACD WORKING GROUP FOR FOREIGN INFLUENCES ON RESEARCH INTEGRITY: DECEMBER 2018 REPORT (2018), https://acd.od.nih.gov/documents/presentations/12132018ForeignInfluences_report.pdf [hereinafter ACD 2018 Report]; GORDON LONG, JASON, MITRE CORP., FUNDAMENTAL RESEARCH SECURITY (2019); Letter from Ted Mitchell, President, ACE Am. Council on Educ., to ACE member Presidents and Chancellors (May 10, 2019).

²⁶⁶ Cf. LONG, *supra* note 265 (“NSF should support reaffirmation of the principles of NSDD-189, which make clear that fundamental research should remain unrestricted to the fullest extent possible, and should discourage the use of new CUI definitions as a mechanism to erect intermediate-level boundaries around fundamental research areas.”).

4. Simplify and standardize rules and processes for interacting with the federal government throughout the entire innovation lifecycle.²⁶⁷
5. Provide greater clarity on what foreign interactions are improper or otherwise disqualifying for future grants.²⁶⁸
6. Consider adopting more safe harbors or preclearance processes for researchers considering potential collaborations and commercializations long before the point of disclosure.
7. Focus prosecutions on cases with behavior that is more culpable than sloppiness.²⁶⁹
8. Consider adopting models that use tools other than prosecution to achieve the same goals.²⁷⁰
9. Better reconcile national security law, immigration law, and antidiscrimination law.²⁷¹

²⁶⁷ See ACD 2018 Report, *supra* note 265 (“To avoid developing different guidance from different agencies, NIH should develop communications materials, additional training guidelines, policy updates, and changes to reporting requirements in collaboration with other U.S. government agencies, especially key funding agencies, to streamline and unify requests and requirements.”).

²⁶⁸ See LONG, *supra* note 265 (“NSF should adopt, and promulgate to all stakeholders, project assessment tools that facilitate an evaluation of risks to research integrity for research collaborations, and for all non-federal grants and research agreements.”); ACD 2018 Report, *supra* note 265 (“NIH should evaluate existing policies and forms and make explicit what must be reported as other support.”); Elsa Kania & Joe McReynolds, *The Biden Administration Should Review and Rebuild the Trump Administration’s China Initiative from the Ground up*, LAWFARE (Feb. 22, 2021, 10:55 AM), <https://www.lawfareblog.com/biden-administration-should-review-and-rebuild-trump-administrations-china-initiative-ground> [<https://perma.cc/9CKV-J6JK>].

²⁶⁹ See Press Release, Olson, *supra* note 136 (“In evaluating cases moving forward, [the DOJ’s National Security Division] will work with the FBI and other investigative agencies to assess the evidence of intent and materiality, as well as the nexus to our national or economic security. These considerations will guide our decisions—including whether criminal prosecution is warranted or whether civil or administrative remedies are more appropriate.”).

²⁷⁰ NASA’s Aviation Safety Reporting System (ASRS)—in which pilots, cabin crew, mechanics, air traffic controllers, and others can confidentially submit concerns about aviation dangers without fear of punishment—offers one potential model. See AVIATION SAFETY REPORTING SYSTEM, <https://asrs.arc.nasa.gov> [<https://perma.cc/766X-5CHY>] (last visited Aug. 30, 2022).

²⁷¹ This recommendation is developed in a companion paper.

B. *Recommendations for Universities and Other Institutions*

Universities and other research institutions have a variety of potentially conflicting responsibilities and interests with respect to research integrity. As Karman Lucero has written, they should respond with more “vigilance” as well as more “transparency.”²⁷² Critically, institutions must not merely delegate the burdens and uncertainties of compliance to individual researchers.²⁷³ Rather, university leadership should prospectively and openly:

1. Model the importance of basing policy decisions on factual and scientific analysis, and distinguish clearly and publicly among factual, legal, and prudential considerations.
2. Appreciate the personal and professional sensitivities and vulnerabilities involved in enforcement activities.
3. Clarify the relationship between internal university investigations and external federal investigations.
4. Clarify policies on notice to individuals regarding internal and external investigations.
5. Distinguish between, and clarify policies for, voluntary and involuntary disclosures of individuals’ data to governments.
6. Clarify the nature and extent of institutional support for researchers, including indemnification and defense as well as potential conflicts and other limitations.
7. Establish and prioritize criteria for the kinds of collaborations and countries that receive greater scrutiny in internal approval and oversight processes.
8. Provide robust resources for recordkeeping and disclosure so that these administrative burdens do not fall on individual researchers.

²⁷² Karman Lucero, *Beyond the China Initiative*, LAWFARE (Feb. 22, 2021, 9:01 AM), <https://www.lawfareblog.com/beyond-china-initiative> [https://perma.cc/FSK5-CY74].

²⁷³ *Cf. id.* (calling on “university administrations to develop a general culture of transparency and the mechanisms needed to support it”). Indeed, fields as diverse as cybersecurity and road traffic safety already recognize that systems that depend solely on the performance of end users are certain to fail. *See, e.g., Zero Deaths and Safe System*, U.S. DEP’T OF TRANSP. (Mar. 15, 2022), https://safety.fhwa.dot.gov/zerodeaths/zero_deaths_vision.cfm [https://perma.cc/FSK5-CY74].

9. Leverage existing approval and supervisory gateways (such as institutional review board approvals and travel authorizations) to simplify compliance.²⁷⁴
10. Cultivate belonging among foreign students and researchers.
11. Document the impacts of compliance processes on individuals and on innovation.

C. Recommendations for Individuals

It is nearly tautology that individual faculty, staff, and student researchers are most at risk in enforcement activities directed at individuals. However, individual and collective strategies can help to mitigate these risks. In particular, researchers should:

1. Disclose consistently, thoroughly, and systematically.
2. Insist on sufficient university resources for recordkeeping to improve the accuracy of records and ensure that researchers can spend their time on research.
3. Seek ongoing advice, expertise, and support services from existing relationships (including with accountants, lawyers, insurers, and software providers).
4. Understand the responsibilities, authorities, and policies of their institutions, including respect to the above institutional recommendations.
5. Train, support, and advocate for their research assistants and graduate students.
6. Join formal and informal inter-university support networks.
7. Check in with—and listen to—their colleagues about experiences, fears, and impacts.
8. Document impacts to their work, including time that they spent on compliance and decisions that were influenced either by policies on foreign interaction or concerns about potential enforcement.
9. Speak up about individual or systemic injustices.

²⁷⁴ See, e.g., ALEXANDER A. BUSTAMANTE & SHANDA HUNT, UNIV. OF CAL., FOREIGN INFLUENCE 25 (Feb. 6, 2020) (integrating travel insurance system with export control program).

VII. CONCLUSION

We conclude with this last recommendation: *speak up*. In part because, at least in some ways, it seems to have worked. When we began writing this Article, we heard about the “China Initiative” largely in meetings and side conversations. In the years since, the topic has attracted significant, if still insufficient, public attention from a variety of organizations and news outlets. In announcing the formal end of the initiative, the head of the Department of Justice’s National Security Division expressly referenced “concerns from the civil rights community” and “from the academic and scientific community.”²⁷⁵ As others have recognized,²⁷⁶ this step is important and yet still just a start. If protecting against improper foreign interaction requires vigilance, so too does protecting the incredible innovation that it targets.

²⁷⁵ Press Release, Olson, *supra* note 136.

²⁷⁶ *See supra* notes 130–44 and accompanying text (The China Initiative: Background).