Q & A

# Jeff Stoff & Glenn Tiffert on Why the U.S. Needs to Do Its Homework on Chinese Research Partners

The authors talk about their new Hoover Institution report, the big picture of unclassified research collaboration, and why academics can't just neatly compartmentalize risk.

BY DAVID BARBOZA — JANUARY 9, 2022

*Glenn Tiffert is a research fellow at the Hoover Institution at Stanford University, and an expert in China's legal and political history. Jeffrey Stoff was a longtime government official who advised the White House, the Departments of Defense and State, and the Office of the Director of National Intelligence. He is the founder of Redcliff Enterprises, a start-up that seeks to build public-private partnerships dedicated to protecting research and intellectual capital. The authors have collaborated on two Hoover Institution reports that look at U.S.-China scientific collaboration including, most recently, "Eyes Wide Open," a study that examines ties between global research institutions and China's surveillance state. What follows is a lightly edited Q&A.*

Glenn Tiffert.
*Illustration by Kate Copeland*

**Q: "Eyes Wide Open" is a report about the risks of collaborating on research with Chinese institutions, with a focus on one organization in particular, the Chinese Academy of Sciences Institute of Automation, also known as CASIA. How did this project come about?**

A: **Glenn Tiffert:** I'm a historian of 20th century China and one of my areas of research is China's effort to control its history, particularly under Xi Jinping. I was finding evidence, even six years ago, of aggressive filtering of the historical record and reshaping of historical narratives. This was just as the larger conversation about China's influence in foreign academia was getting started. In particular, people were awakening to the subtle ways in which China exerts power to coerce academics to change discourses or to censor what gets published, even in western publications. After I began documenting some of this and talking about it to academic institutions, an acquaintance said, "You really need to meet Jeff [Stoff], because he's doing closely aligned work."

**Jeffrey Stoff:** When I started working with Glenn on our previous project, "Global Engagement: Rethinking Risk in the Research Enterprise" (2020), I was still in the government, examining the national security and economic security implications of informal, unclassified research collaboration between U.S. research institutions and federally funded research labs with Chinese institutions. Unclassified research is typically protected under National Security Decision Directive-189 (NSDD-189). There's no export control issues there. And what I found working in the government was that there is significant collaboration of concern taking place — where the DoD [U.S. Department of Defense] is funding unclassified research where the funding recipients in the U.S. are collaborating with institutions that are part of China's military industrial base. That presents serious risks to the U.S. government. So I started to look into that more systematically; and the more I dug, the more I found. That resulted in a survey that Glenn and I did on the Seven Sons of National Defense schools of China. When I left the government in August [2021], I wanted to continue this work by looking at the public security and mass surveillance arenas.

Jeff Stoff.
*Illustration by Kate Copeland*

**And what did you find?**

**Tiffert:** We found that universities generally conduct no systematic examination of whether the nature of a collaboration comports with U.S. national interest or even human rights and other democratic and academic values. In most fields, the burden is on the individual researcher to pursue those questions, and too often their default position is narrower than that: "I have an interesting problem that I want to explore with a partner who has the right skill set, and maybe some funding. And we'll just do this little piece of research together, not necessarily looking at the bigger picture." For our current project, we decided to look at one entity —the Chinese Academy of Sciences Institute of Automation (CASIA), which is a global leader in research on artificial intelligence and brain science — as a case study for how that approach can misfire, simply because the usual trust-based assumptions about who your partner is may not apply when that partner operates in an authoritarian system.

**Stoff:** CASIA, in fact, appears to be a poster child for why and how robust due diligence on research partners in authoritarian nations like China is necessary. And that involves not simply looking at the organizational structure — the leadership, the programs and the partnerships that CASIA has — but surveying its research output, domestically and internationally. Who do they partner with on research? In this case, we found that CASIA's affiliates are well integrated in [China's] innovation and industrial base and they own or support commercial operations. CASIA is not simply involved in theoretical research; it's commercializing and weaponizing the technologies developed there. And with regard to surveillance, they house one of the leading Chinese institutes


Stoff and Tiffert authored two recent reports published by the Hoover Institution on the risks of research engagement with foreign entities, particularly with China. *Credit: Hoover Institution*

conducting AI and computer vision. These AI, computer vision, and machine learning applications translate well to a number of surveillance-related sub-disciplines. CASIA develops those applications for the Chinese party-state, which deploys them domestically, in places like Xinjiang, and they also export them.

**So what troubles you is the institute's ties to the military and the country's surveillance state, and the fact that American universities and international research institutes are collaborating on this research. Is that right?**

**Tiffert:** You've put your finger on one of our key findings. CASIA is emblematic of a whole class of entities in authoritarian nations that are Janus-faced. They have a side to them that looks like who you would want to work with. They have world-class talent. They're doing interesting research that excites people globally. They're hungry to push the boundaries of human knowledge forward. They're generously funded. If you're a potential collaborator, anywhere in the world, this is who you would want to partner with, just on the merits. But because of the context in which they operate, there's this other side to them that engages with the surveillance state, a police state, in China; and they're subject to its dictates. It'd be very different if you were partnering with someone working in the UK, or Australia, Japan or Germany, because in a liberal democracy you hopefully don't have to worry as much about basic questions like: Are research subjects being coerced into providing their biometrics?

**Can you be more specific about what type of research is so alarming?**

**Tiffert:** CASIA collaborates with prestigious foreign universities and technology companies on a range of topics in brain science, artificial intelligence, and computer vision. Some of the topics that raise the greatest concern from a human rights perspective have to do with applied biometric identification, particularly iris, facial and gait recognition. Specific examples of the published research that comes out of these international collaborations include using AI to automatically tag and track individuals and vehicles moving through crowded or highly dynamic scenes across large networks of remote cameras, and identifying individuals, even at night or while masked, by scanning their gaits or irises from a distance. These might sound like interesting research problems in the abstract, but it is well documented that the Chinese government applies the same technologies to surveil its population and repress dissent. A glaring example is a recent proposal by the Henan provincial public security bureau to use remote cameras, computer vision and AI to automatically identify and tag with green, yellow, or red flags "people of concern," including journalists, foreign students, and migrant women.

| BIO AT A GLANCE | |
|---|---|
| NAME | Jeffrey Stoff |
| CURRENT POSITION | Founder of Redcliff Enterprises, a start-up that seeks to build public-private partnerships on research security. |

**Stoff:** Some of the CASIA personnel at the forefront of these international collaborations have troubling associations. Take Dr. Tan Tieniu, one of the founders of CASIA and a renowned expert in computer vision and AI. He was trained in the UK and then returned to China and built an international reputation partly by creating partnerships at CASIA with foreign companies and universities. But there is a darker side. He has an equity stake or leadership position in at least four of CASIA's commercial spinoffs — all of which state their primary mission is to run video surveillance, facial recognition, and iris recognition for mass surveillance applications. These are products and services deployed in partnership with public security bureaus at national and local levels. His companies' video and visual surveillance products are deployed in Xinjiang for "anti terrorism efforts."

The icing on the cake is that he was appointed four years ago as deputy director of the Chinese central government liaison office in Hong Kong. In our report, we find it disturbing that a renowned expert in developing and commercializing mass surveillance technologies

was given a leadership position in Hong Kong just as the government began to crack down on dissidents and civil society. As a result of those activities, he's now on the Treasury Department's Specially Designated Nationals list. So he's a sanctioned individual by the U.S. Department of Treasury, nevertheless he continues to foster substantial international research collaboration. [*The Wire* has attempted to contact CASIA and Dr. Tan Tieniu to ask for a response but has not yet received one.]

**Is there evidence that CASIA works directly with the Ministry of Public Security, which has police operations, or the People's Liberation Army?**

**Stoff:** Yes on both counts. With respect to the Ministry of Public Security (MPS), we surveyed CASIA's domestic research output and found that CASIA collaborates with MPS-affiliated researchers, credits MPS funding on some of its research, and/or published articles in an MPS-run journal. Topics in these publications include facial and iris recognition, biometric identification, human posture estimation, etc. CASIA has also won multiple government awards for its surveillance technologies, including from the MPS. We also found evidence that CASIA researchers collaborate with the People's Armed Police, China's paramilitary police force, which performs domestic security and surveillance functions.

And while CASIA's support to China's defense apparatus wasn't the focus of this report, we do have a large appendix that catalogs a number of research partnerships with PLA organs, five or six of the major state-owned defense conglomerates, and all seven of the "Seven Sons of National Defense" universities.

**Are there clues about the origins of this network that blends research labs and innovation centers with the surveillance state?**

**Tiffert:** China has studied the Silicon Valley ecosystem. CASIA is a state supported institute of academic research. It does basic research and applied research. But there are also spin-off companies that commercialize the technologies that come out of CASIA labs, and that come out of this fundamental research in much the way that a great deal of Silicon Valley owes its roots to university research, venture capital, and academics who then create companies. We found dozens of spin-off companies, and we dug deeply into five of them that are servicing clients in the Party-state for surveillance and defense contracts.

**But couldn't one argue that a great deal of this research is theoretical and advancing knowledge, and helping scientists in other parts of the world pursue new ideas and discoveries for the benefit of all?**

| BIO AT A GLANCE | |
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| NAME | Glenn Tiffert |
| CURRENT POSITION | Research fellow, Hoover Institution, Stanford University |

**Tiffert:** It's often asserted that we need to keep certain pathways of cooperation and collaboration open with China because there are problems of common concern that face humanity, such as climate change, medical research, and dealing with pandemics. In principle, it's hard to argue with that. However, in reality it's not so simple. CASIA may be doing fundamental research into potentially beneficial facets of medicine, but some people you're working with may be diverting or applying the techniques and technologies to malign applications. We document that this happens. Simply saying: "I have nothing to do with that; I'm just collaborating on this project in, say, neuroscience" is not a satisfying response. You can't neatly compartmentalize such things.

Some of these projects are dual-use and can be framed or described in narrow terms so that the human rights considerations or the defense considerations are not readily apparent. We all use facial recognition to unlock our phones now, right? The problem is not necessarily with the technology per se but rather with the entity you're partnering with and the use cases it is applying that technology towards. Can you trust them? Is this the kind of company that

you want to keep? Are you sure that the facial recognition technology or the iris recognition technology, or the neuromorphic computing questions that you're exploring are not going to be applied by your partner to a context that's completely abhorrent? If you can't answer those questions satisfactorily, then maybe you shouldn't be working with that partner.

> **I can tell you that the problem is widespread. There are 224 U.S. research institutions implicated in our dataset, pretty much every major university that parents in America would like to send their kids to is on the list.**

**Stoff:** And collaboration with the U.S. is the prime example of this problem. Almost 40 percent of the corpus of literature that we examined involved U.S. collaboration in medical and neuroscience fields funded by [National Institutes of Health] NIH. We're not questioning the value of that research; the NIH-sponsored research is probably sound and worth funding. The problem is that CASIA coauthors and partners with many of the U.S. entities receiving NIH support. More than 80 percent [of the corpus that credits NIH] is affiliated with a particular state key laboratory at CASIA, the National Laboratory of Pattern Recognition, whose primary mission is computer vision and surveillance. But at least some of the researchers from the brain science institutes that CASIA runs are partnering on surveillance applications. So there is a real risk that beneficial research is being diverted to ethically troubling areas.

**Who are the collaborators you refer to? What universities are partnering with these efforts in China? Is there a reason the report does not name them?**

**Tiffert:** We gave this careful thought. Our concern is that if we publish the names, then that would become a distraction when what we're really trying to do is change practices. I can tell you the problem is widespread. There are 224 U.S. research institutions implicated in our dataset — pretty much every major university that parents in America would like to send their kids to is on the list. And when you're talking about 224, the problem is systemic and we should talk about it in systemic terms rather than find fault with particular institutions.

**MISCELLANEA**

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| NAME | Glenn Tiffert |
| BOOK REC | *Snow Country* by Yasunari Kawabata |
| FAVORITE MUSIC | Glenn Gould, John Coltrane, Jimi Hendrix |
| FAVORITE FILM | *Dr. Strangelove* |
| PERSONAL HERO | Hannah Arendt |

**Why is it that these global companies or universities are not steering clear of the programs? Is it that they don't see the troubling things you've described, or that they doubt such things exist?**

**Stoff:** Companies and universities aren't going to check into this unless it's part of an export control requirement. If a PRC research institute is on the [U.S.] Entity List, the U.S. firm or institution needs to ensure they're not doing business with them or have received regulatory approvals (such as an export license). In certain industries, executives are saying, "Look, we want to do business. We need to do business. We welcome a regulatory framework. If the U.S. government says we shouldn't be engaging with certain entities, then tell us — put it in a regulatory framework so that we can work within that." Many companies, in other words, are not going to proactively do this on their own. That's one challenge. I get the sense that U.S. entities are not doing this because they don't have to. There's no rule saying they can't [work with the PRC institutes]. Conducting the level of robust due diligence that we're talking about is difficult. So we need a new paradigm, a new operating model. We shouldn't wait and rely on the U.S. government to come up with a set of rules of dos and don'ts or

can't. We need a collective effort looking at this burden, at a sharing of resources, in terms of mapping and due diligence; a cataloguing of these entities and who they're partnering with. Then we can broadly share that information so that industry and academia can make more informed decisions.

**Tiffert:** Part of the solution is making it easier for people to do the right thing. We need to institutionalize processes that require people to ask the right questions and to conduct due diligence in order to ascertain that they're not entering ethically troublesome areas.

## MISCELLANEA

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|---|---|
| NAME | Jeffrey Stoff |
| BOOK REC | *Tap Dancing to Work: Warren Buffett on Practically Everything, 1966-2013* by Carol Loomis |
| FAVORITE MUSIC | The Moody Blues, anything by Tchaikovsky, or Mahler. |
| FAVORITE FILM | *High Anxiety* |
| PERSONAL HERO | Wynton Marsalis |

**Many scholars I've talked to say the idea of cutting off research with some of the best and brightest in China would be a catastrophe; that some are doing cutting-edge research, and that it would hamper the overall development of science; that the U.S. would eventually lose out in the process and fall behind in things like AI research. I'm told technology giants like Google also have this concern. What do you say to that?**

**Tiffert:** We're not calling for decoupling, by any means. We're asking for smarter decision-making and for researchers and institutions to adopt safeguards that comport with their own values. Otherwise, it's a race to the bottom. One of the great attractions of many Chinese research collaborators is that they offer tremendous datasets, particularly in the AI space. But it's worth asking, "Where's that data coming from? How was it collected?" We ask these questions domestically. We've been very critical of the applications of AI technologies here in U.S. society as we become more aware of their capacity to make political discourse toxic, and to reinforce inequities of race, gender and wealth. Why aren't we pressing the same questions when we engage with China? Or is working with China an easy way out of having to grapple with those questions? Is China becoming a place where you can do research that is no longer ethical in the United States? Can you simply outsource it? That's not where we want to be. There are many reasons why the Chinese government is investing heavily in AI research and that China is becoming a peer competitor with the United States in this domain. But to a considerable degree, it's because AI is a state priority for applications that we find repugnant.

**That brings up a more challenging issue. Let's say researchers or institutions do some due diligence and find that the researchers or institutions they are dealing with in China are following the most ethical standards, and not affiliated with the state or military, but they are operating inside of China. Since the state and the Party have ultimate control, is there any less a risk? And if the answer is no, what collaboration inside China would pass certification?**

**Stoff:** What you're describing lies at the heart of the challenge. Pretty much anything in a critical technology, no matter where it is conducted in China, and even if we did extensive due diligence on the institute [and found no evidence of partnerships or projects of concern], the Party could use that for military or surveillance. They can take it and divert the research towards applications of their choosing. There's no safe zone in China, and that represents a huge problem for us. How do we get our arms around this? We're still pretty early on in this research. The U.S. government, in my opinion, has failed to present the scale and scope of this problem. So universities don't really know what's going on. They have limited information. There's a tendency to mirror-image these issues. "We're all working on the same problems. We have to collaborate. Science is global."

**Tiffert:** Academia understandably wants a stable, binary decision matrix: 'I can do this and I can't do that.' But we need to break that mentality. They need to think like investors in emerging markets who evaluate risk. Some entities are at one end of the spectrum and are extremely high risk, while others at the opposite end have lower risk. On top of that, conditions may be dynamic. If you're playing in an authoritarian sandbox, you've surrendered the expectation that you're in a low-risk environment, at least in terms of human rights and research ethics, and you'll have to do your homework. This is fundamentally about building new capacity to properly assess and manage the categories of risk that working in authoritarian contexts poses.

**Many of these technologies you're warning about were developed in the U.S. and adopted by global companies to engage in surveillance and to track consumers. Are you saying we should slow the development of them because they have dual uses, or that we just shouldn't develop them with China?**

**Tiffert:** Neither. Some of these technologies can be transformative, but other applications are more contested. Take gait, facial and iris recognition, which are used by advertisers and merchants in the United States. Many Americans find those applications objectionable, and we're having debates in our society about how we might restrict them. What we're saying is, let's extend those questions and that critical perspective to our relationships with partners from authoritarian nations. We're not doing that right now. "Well, China's doing amazing stuff, and we need to collaborate…" begs the question: at what price? The Chinese state routinely flouts transparency, freedom of inquiry, and other basic academic and human rights norms. We're asking: Must we be complicit in that? Why is it that academia [in the U.S.] is not holding itself to the same rules and standards abroad as it does at home?

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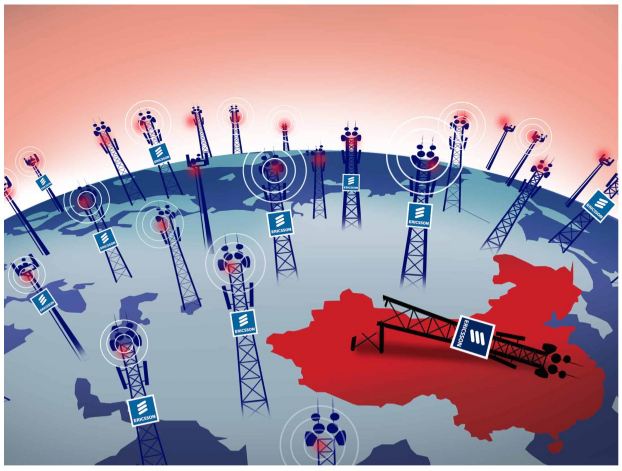

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