

U.S. Efforts to Thwart China's Espionage is Just an Endless Game of "Whack-a-Mole"

To a large extent, U.S. efforts to counter China's espionage is reactive. China chooses the *battleground* on which to engage and sets the *pace* of the engagement. China leaves the U.S. *hustling* to locate, determining how to engage, and then maybe winning the engagement before China brings its actions to fruition – a Chinese "student" studies at a U.S. university doing classified research for DoD climbs aboard a plane to Beijing with a suitcase full of data disks.

In other words, the FBI and the U.S. intelligence agencies play an endless game of *whack-a-mole* with China and all its operatives and various mechanisms.

During the Cold War as a member of the intelligence community, I played "cat and mouse" with the Soviets in our attempts to prevent them from acquiring Western technology. Although we had many successes, it was a losing battle. Why? Because, like the present situation with China, we were playing an endless game of whack-a-mole with the Soviets.

But the situation with China is far worse than the situation we had with the Soviets during the Cold War. Four main factors make this the case.

Favored nation – For several decades, China deceived U.S. leadership into believing that China was evolving into a democratic, free market country and that the more the U.S. supported China's evolution into "one day" becoming more like the West, the quicker China would reach that status. The result was that China had a *free hand* for decades to establish *direct* and *indirect* paths throughout the U.S. and its public and private organizations for acquiring technology, and other data, and for interjecting influence and pressure on U.S. decisions.

Now China has a *mosaic* of interconnected, redundant direct and indirect paths throughout the U.S. and its organizations for the acquisition of technology and data and for exerting influence. The mosaic of interconnected paths consistently provides China with an array of options to adroitly move around any barriers the U.S. institutes in a fluid manner, always maintaining the *initiative* and the aggressive *pace* towards its objective.

This is in contrast to the Soviets, whom the U.S. has always viewed as an adversary. The Soviets had very limited access into the U.S. for establishing their paths for acquisition. Even with the Soviets' best, most aggressive efforts, the paths they established are miniscule compared to what the Chinese have today, yet the Soviets acquired a significant amount of U.S. technology and data that enabled them to match the U.S. militarily in several areas - all from a Soviet economy that was significantly smaller than the U.S.'s.

All means – Although our focus is upon preventing China's espionage, one must understand that China's espionage is just one mechanism in a very large and highly diverse set of acquisition mechanisms that China executes in a coherent manner. The acquisition mechanisms range from very *legal* licensing of technology to the *gray* area of putting a Chinese research "student" inside a U.S. university executing R&D to outright, *covert theft* of U.S. technology via hacking into a Defense Department server.

China bases which of these mechanisms to use upon a range of factors, but from a high-level perspective, the overarching issue is cost/risk versus reward. The *cost/risk* can include items like negative political ramifications (as with the recent spy balloon incident), funds, and/or loss of an operative, and the *reward* is the competitive advantage that China will be able to generate in one or more of the spaces.

China may first start with a low-cost acquisition mechanism, which has the optimum cost/risk-to-reward ratio, but if that acquisition mechanism is not successful (e.g., a company refuses to license the technology to a Chinese national), China will escalate to a higher cost option (e.g., placing a Chinese operative into the company to steal the technology), depending upon the expected reward.

Also, the case is that no *one* technology or piece of data alone is what provides China with the required competitive advantage (That scenario only happens in spy movies.). China generates various competitive advantages in different competitive environments (a.k.a. states) that it requires to achieve its national objectives by using the full range of acquisition maneuvers (including Chinese indigenous development) to acquire the full range of technologies.

A vast majority of the technology and data that China acquires from the U.S. is *not* via espionage. China resorts to espionage when China deems that it provides the most effective cost/risk-to-reward ratio, but, in most cases, it is *not* necessary.

China fully utilizes, in a very adroit, fluid, *balanced* manner, the full range of *acquisition maneuvers* and the fact that there are almost always options on the *technologies* that will be effective and the *organizations* that China can target for the technologies to generate the required competitive advantage.

While the U.S. agencies are celebrating having stopped China from acquiring one technology from one organization, China has simultaneously successfully pursued two different technologies from two other organizations that provide China with the same competitive advantage – China never broke its stride.

Unrestricted warfare – For those last several decades, China has been executing unrestricted warfare against the U.S.

China's *unrestricted warfare* consists of addressing all what China considers as natural and social spaces of the U.S. competitiveness ecosystem in a coherent, unified manner as the means of executing warfare. *Natural* spaces include ground, seas, air, and outer space, and *social* spaces such as military, politics, economics, culture, and the psyche are also included as China's battlefields.

But, as Xi Jinping has often correctly stated, Technological space linking these two great spaces is even more so the battlefield.

An important note is that technology is *any* application of science to accomplish a function, and technology is comprised of equipment, material, and know-how.

China's acquisition maneuvers are targeting U.S. technologies for all the natural and social spaces, ranging from high-tech to low-tech, hard to soft, and highly critical to basic and supportive, as China requires to generate and maintain a competitive advantage in targeted areas of all these states.

As China executes in the first two factors, China also maneuvers in a very fluid manner in this third factor (unrestricted warfare).

China adroitly maneuvers throughout the full range of areas that comprise the natural (e.g., ground, seas) and social (e.g., military, culture) spaces. China's planners see and address all natural and social spaces as a single, interconnected *continuum*. And just as they do when they address the full set of acquisition maneuvers, they address the cost/risk-to-reward ratio of targeting various areas at various times within the natural and social states to ensure that China continues to move forward, unabated on achieving its national objective.

China's flooding the U.S. with fentanyl that decreases the pool of eligible and willing U.S. military recruits and active U.S. warfighters, is just one *near-term* cost/risk-to-reward effective action within a coherent set of actions in the various areas of the social states for decreasing the ratio of U.S. warfighters to Chinese warfighters for the potential *long-term* hot war.

So, when we combine the three factors – favored nation, all means, unrestricted warfare – one can see that the present U.S. approach to minimizing China's efforts to benefit from U.S. technology is truly a no-win game of whack-a-mole for the U.S.

China has at its disposal a *mosaic* of interconnected, redundant direct and indirect paths to execute the *complete range* of acquisition maneuvers in a fluid, stepped, orchestrated manner to minimize cost/risk and maximize competitive advantage to acquire the *full range* of levels and types of technologies China needs to generate the required competitive advantage in various areas of all the competitive environments.

What enables China to be effective in this vast, complex array of paths, maneuvers, technologies, and competitive environments is China's national technology strategy, which is the foundation for coherent, orchestrated decision-making for all constituent public and private organizations of China's competitiveness ecosystem.

National technology strategy – All the technology acquisitions (which includes what some consider as data acquisitions) that China executes are *integral* elements of China's national technology strategy. Their national technology strategy dictates which technology and data China will acquire from what potential targets. Also, the national technology strategy (how China exploits technology in concert with the other technologies they are exploiting) dictate the value of a technology (i.e., what competitive advantage China will generate from it).

In effect, China's national technology strategy amounts to a very *adroit, fluid, coherent* game of offensive/defensive worldwide technology exploitation *chess*. Like all games of chess, winning is a matter of maneuvering. In this case, China is maneuvering with a wide range of coherent technology acquisition maneuvers and technology utilization maneuvers to adroitly exploit technology to consistently generate and maintain increasing levels of competitive advantage relative to the U.S. in an increasing number of areas throughout what China calls the natural (e.g., ground, seas) and social (e.g., military, political) states.

Countering China – So how does the U.S. effectively counter not just China's espionage but China's benefiting from all aspects of U.S. technology exploitation? *Not* by attempting to detect and then quickly neutralize individual acts of espionage by Chinese operatives and mechanisms before they come to fruition. That is an endless game of whack-a-mole. And not by relying upon export controls, which is just a Maginot line. As General Patton famously said, "Fixed fortifications are monuments to man's stupidity" – the static export control lists.

To prevent China from benefiting from U.S. technology exploitation – development, acquisition, and utilization – including China's espionage, the U.S. must counter China's national technology strategy, which fully dictates China's technology exploitation – technology development, acquisition, and utilization – including China's espionage.

This was the similar conclusion we reached when addressing how to effectively counter the Soviet's espionage. We needed to address the Soviet's national technology strategy with a more effective technology strategy, one that would be able to adroitly outmaneuver it at every turn.

That was the genesis for Reagan's Socrates Project. Socrates was a joint Reagan White House/U.S. intelligence community with the mission of developing the means to ensure America's status as a superpower for generations relative to Soviet and other threats.

Socrates developed the means to evolve the process of exploiting technology for a competitive advantage from a low efficiency, high uncertainty, trial-and-error *art*, as the Soviets executed then and now by the Chinese for their respective national technology strategies, to a high efficiency, high certainty concrete *science* – the Automated Innovation Revolution.

The Socrates Automated Innovation System, exploiting technology as a science, enables one to determine a competitor's/adversary's technology in precise and accurate concrete detail and then to generate a technology strategy that exploits technology with such unprecedented *speed, efficiency, and agility*, that one can consistently outmaneuver the competitor's/adversary's technology strategy at every turn for an *unmatchable* competitive advantage in all competitive environments.

The Socrates Automated Innovation System was a key asset that President Reagan used in his negotiations with Gorbachev to convince him to dismantle the Soviet Union. The Socrates Project also used the System to identify the China threat for President Reagan and was on track to fully counter China.

Upon taking office, President Bush abolished Socrates. Since then, China has aggressively executed its national technology strategy to methodically and adroitly outmaneuver all U.S. and allied efforts to counter China. The result is that China has achieved increasing levels of competitive advantage over the U.S. in a growing number of areas throughout all competitive environments – military, economic, culture, political, etc.

Since the abolishment of the Socrates Project in the government, we have continuously updated and refined the design of the Automated Innovation System to more than outpace China's increasing capabilities and growing presence on the world stage.

The U.S. needs to reestablish the Socrates Project and deploy the Automated Innovation System as a national asset for use by all constituent public and private organizations of the U.S. economic and military competitiveness ecosystem, as well provide support to key allied countries as President Reagan envisioned... before it's too late.