Cyber Colonization: The Dangerous Fusion of Artificial Intelligence and Authoritarian Regimes

Matthew Crosston

While generally the advancement and development of artificial intelligence (AI) infrastructures is lauded as having the potential to open up a brave new world of positive cyber capacity, there is a decidedly darker underbelly to this potential currently underway. States like China aggressively market the transfer of advanced AI technology around the globe, particularly to allies across the Middle East and North Africa, Sub-Saharan Africa, and Latin America. Far from just being about participating in the global economy or developing the cyber infrastructure of developing nations, China is also sharing its censorship, disinformation, and public opinion-shaping technologies that could be the future of regime protection and could undermine grassroots democratic activism. Rather than seeing cyber power as a doorway to a new era of openness and information exchange, China views the true power of cyber as a tool built for traditional safeguarding of national security and domestic political interests. More impressively, most studies show that China should at first catch up to the United States and then surpass it as the AI global leader by 2030. Might this signal a paradigm shift for the potential of AI from cyber peacebuilder to de facto cyber colonist?

Keywords: Cybersecurity, China, technology transfer, geopolitics, artificial intelligence, surveillance

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Introduction

While in general terms, the advancement and development of artificial intelligence (AI) infrastructures is lauded as possibly opening up a brave new world of positive cyber capacity and being a forceful driver of new international economic development, there is a decidedly darker underbelly to this potential currently underway. States like China aggressively market the transfer of advanced AI technology around the globe, particularly to allies across the Middle East and North Africa, Sub-Saharan Africa, and Latin America. Far from just being about participating in the global economy or developing the cyber infrastructure of developing nations, countries like the United States worry that a more strategic transfer is also happening. Will these countries also become enamored with not just the technological improvements but also with China's approach to domestic governance, where censorship, disinformation, and public opinion-shaping technologies push regime protection and undermine grassroots democratic activism? Is China de facto creating a future of tech-driven authoritarianism as a competing model against emerging democracy?

Rather than seeing cyber power in all its positive diverse and developing evolutions as a doorway to a new era of openness and information exchange, China may also be maximizing a hidden strategic-diplomatic power of cyber as a tool for the traditional safeguarding of national security and domestic political interests. More impressively (or disturbingly?), many are speculating that China will likely first catch up to the United States and then surpass it as the AI global leader by 2030. Might this signal a paradigm shift for AI and cyber potential in general from cyber peacebuilder to de facto cyber colonist? Specifically, this paper will examine these possibilities by looking in-depth at the project known as "Made in China 2025" (MIC). First announced in 2015 as a fairly non-controversial economic development project intended to shift China from being a low-end manufacturer to a high-end producer of technology, MIC has rather quickly become embroiled in multiple levels of global controversy, marked by tense diplomacy, foreign policy criticism, and rumors of economic trade war. This is, of course, intriguing because China has always emphasized that MIC is mainly a domestic initiative (Germany had a similar one after which the Chinese somewhat modeled theirs) with almost no explicit references to China exporting technologies to the world but

rather to adopting and improving the ones that it can get its hands on through investments, mergers and acquisitions (M&As), and local developments.

What this paper intends to examine in terms of the foundation of MIC, however, is quite different from how it has been focused on to date. Instead of examining how it has become a economic bone of contention between the United States and China, the focus here is more about the potential strategic and political leverage of MIC if China ultimately succeeds in the aforementioned desired shift. If China no longer depends on the United States for technology transfers and instead becomes its own greatest producer of new technology, then how will this manifest itself in its dealings with other countries when it comes to economic investment and increased political capital? In other words, if MIC is a success, does it help fuel China's rise as a global technology influencer according to its own standards and political norms of behavior?

It is no secret that the United States has for decades succeeded in dominating the diplomatic influence by also being the de facto underpinning for the entire global economy. With development in the twenty-first century being largely tied to a country's ability to transform its local economy into a high-end technological base, would MIC make China a global technological "smart" power, able to wield tremendous diplomatic, strategic, and foreign policy influence in ways that would run counter to American interests and values? Could MIC be the spur to making China's political regime a true model for other countries to emulate, discarding the leadership model pushed for nearly a century by the United States? Although it officially denies any such secret purpose, is this how China might finally realize the "Chinese model of development," which many have argued China is trying to subtly export to the developing world—capitalism with "Chinese characteristics"—generally meaning no liberal democracy, limitations on a fully liberalized market, and significant constraints on domestic civil liberties. It is the back-end consequences that occupy the main considerations of this study. If anything, this study will show how the potential connection between a successful MIC and China forging a lead in global technology innovation is being dangerously ignored. This is a misstep, as the much-publicized "trade war" initiated by US president Trump has held an undercurrent of concerns about global leadership on tech innovation but has been very much focused

on the Chinese domestic market and not about foreign policy extrapolations to other critical world regions.

This article in the end does not aim to tackle the deeper philosophical questions embedded in this new reality, but it does relate to the main thesis about the future of Chinese global technology leadership: If China proves that innovation, drive, and emerging technological genius do not, in fact, rely on the nurturing presence of democratic freedom and the full portfolio of civil liberties, then why would authoritarian countries bother with the United States for its future tech acquisitions. Perhaps even more importantly, why should they listen to mature democracies telling them that economic progress can only happen via democracy and their proper alliance to democratic principles?

Made in China 2025: What Is it and Why Should Anyone Care?

When first examining the original thinking behind the MIC 2025 project, it is somewhat difficult to even find fault with Chinese thinking. Without trying to get too lost in the micro-weeds of the project, some of its major goals have focused on China's raising the domestic core content of its technological components and materials in order to ultimately render China not only self-sufficient for its own domestic technological needs but to also transform it into a major participant and leading competitor within global technology markets.[1] Specifically, MIC seeks to command 40 percent of the global innovation technology market by 2020, 70 percent by 2025, and, ideally, by 2049—the one-hundredth anniversary of the People's Republic of China—a self-sustaining dominance on the global technology stage, bar none. Inspired by Germany's own "Industry 4.0 Development Plan," China is attempting with MIC to join the so-called fourth industrial revolution, which is, in a nutshell, the successful integration of cloud computing, big data, and other advanced emerging technologies with global manufacturing supply chains. For China, the industries potentially impacted are quite extensive, and it includes not just IT and AI writ large but also advanced robotics, aerospace engineering, materials science, biomedicine, and the lynchpins of its other

1 Dezan Shira and Associates, "What is Made in China 2025 and Why Has it Made the World So Nervous?," *China Briefing,* December 28, 2018, https://www.china-briefing.com/news/made-in-china-2025-explained/.

great into-the-future project, the Belt and Road Initiative (BRI), high-end infrastructure, and maritime engineering.[2]

Given that many of these goals seem entirely logical for a state power seeking sustainability and maximized leverage, why is MIC deemed so "controversial" by other countries, particularly the United States? After all, the United States has, off and on, been pushing its own campaign of "Made in America" and "Buy American" for at least fifty years. The key to the controversy, at its core, is more an issue of politics than economics. If MIC achieves its goals, it does not simply strengthen domestic Chinese companies. The worry (mainly for the United States and the European Union) is that since China is not a liberal market that plays "by the rules" of free trade, its global champions will be backed by the state in terms of subsidies, easy-access loans from state-owned banks, and significant political backing when it comes to competition in the domestic Chinese market.[3] The thinking is expressed most efficiently by President Trump and his manufactured trade war with China during his first term. He has emphasized how MIC is basically a modern-day shakedown: In return for these "forced" technology transfers to China from US companies, China will grant greater (but still limited and constrained) domestic market access to American companies. The uneven playing field becomes concretized: Since China has either direct or semi-direct state control in its major domestic industries, it removes certain natural market fears and risks from its companies that other foreign entities must deal with. The larger point being made here is not that these initial MIC criticisms are irrelevant; rather, they are the lesser criticisms: If China succeeds in securing a sustainable position of global dominance in technological innovation, the biggest problem will not be whether American companies can compete with China but rather whether China will politically influence countries on the global stage.

While the Trump trade war strives to weaken this domestic advantage and at least rhetorically argues that the United States is trying to convince China to make structural reforms so it will be more similar to a liberal economy than what is termed "state capitalism." It is, nonetheless, missing the deeper

2 James McBride and Andrew Chatzky, "Is 'Made in China 2025' a Threat to Global Trade?," *Council on Foreign Relations,* May 13, 2019, https://www.cfr.org/backgrounder/made-china-2025-threat-global-trade.

3 Dezan Shira and Associates, "What is Made in China 2025 and Why Has it Made the World So Nervous?"

long-term strategic consequence: If China can trade all this attention on short-term domestic market access for long-term self-sufficiency and future global dominance in technology innovation (with all its commensurate strategic advantages), then it will likely do so unhesitatingly. It is still not entirely clear why the United States fails to emphasize how damaging this consequence would be to its global strategy. The emphasis on the progress of domestic market access hurts not just American global economic leadership but actual US security interests across the globe.

China clearly slowed down some of the more grand statements about MIC in the afterburn of Trump's criticism (including it not even being mentioned for the first time since being introduced in 2015 at the opening session of the 2019 National People's Congress[4]), but very few believe this gesture represents anything other than a strategic rebranding of the project so as to attract less attention while still moving toward its ultimate goals.[5] After all, some studies go deeper than describing MIC as simply China's effort to go from making toys and t-shirts to manufacturing leading-edge technology: It is a program that relies on "discriminatory treatment of foreign investment, forced technology transfers, intellectual property theft, and cyber espionage."[6] Copying the German approach to an anticipated fourth industrial revolution, MIC clearly refers to the integration of big data, cloud computing, and many more emerging technologies. Uncoincidentally, China has often used these fields in the present-day to power AI programs of a political nature: tracking, surveillance, and monitoring technology; self-interpreting facial recognition; political hacking technology; and the facilitation of disinformation campaigns.

The problem, of course, is one of believability: China may be intent on framing MIC as merely aspirational and unofficial, but its economic model has always integrated state control over market success, and political domination over individualized entrepreneurship. Therefore, it seems highly unlikely that China would not maximize the political and strategic leverage it could gain from a leading global technology position. And that political/strategic leverage will be in China's interests and resembling China's model. It will not be a spur transforming China into something more "American-like." It

4 McBride and Chatzky, "Is 'Made in China 2025' a Threat to Global Trade?"
5 Dezan Shira and Associates, "What is Made in China 2025 and Why Has it Made the World So Nervous?"
6 McBride and Chatzky, "Is 'Made in China 2025' a Threat to Global Trade?"

will be an engine to promote China's vision of economic development at the expense of true political diversification and maturation across the globe.

In chess terms, this apparent early downplaying by China is nothing but sacrificing a pawn in order to better position the queen for later. It is completely in line with traditional Chinese foreign policy positioning and, perhaps more satisfyingly, is playing the current American president's penchant for "media victories" that have little major impact. So, while the White House seems presently short-sighted on the true threat potential of MIC, this is not to say reputable media and think-tank organizations are necessarily doing any better on the foreign strategic consequences. The worry is that this creates a negative analysis feedback loop in America that will only institutionalize long-term short-sightedness.

Critiquing MIC: On Point or Way Off Track?

In the most basic of arguments, the debate over MIC boils down into two very distinct camps. Where one falls within these camps determines the overall position taken about MIC. The competing sides can be summed up as follows: MIC aims to use government subsidies, mobilize state-owned enterprises, and pursue intellectual property acquisition to catch up—and surpass—Western technological prowess in advanced industries versus the view that MIC can only succeed by relying on Chinese policy that discriminates against foreign investment, pushes forced technology transfers that are akin to de facto blackmail, and encourages intellectual property theft, backboned by cyber espionage.[7]

What matters most in this study is how the dominant camps are still structurally set up to be concerned about present-day goals and how they would impact the competitive success of American companies. At best, there is a little bit of long-term concern about China striving to replace the United States as the economic leader in these high-tech targeted industries and—even more crucially—in international standardization, where cyber truly comes into play and is a sneaky, efficient way to engineer subtle dominance. But what has been shoved to the backburner by too many so far is the concern of the US intelligence community of MIC as potentially being a fairly efficient "soft" war, which may be technically illegal but not so egregiously as to warrant a true military retaliatory action. In this undervalued camp, the focus

7 McBride and Chatzky, "Is 'Made in China 2025' a Threat to Global Trade?"

is on China's recruitment of foreign scientists, its continued brazen theft as a matter of its formal policy of intellectual property, and direct investments that can potentially lead to ultimate M&As in critical technologies and strategic infrastructure (for example, such Chinese efforts in 2016 alone amounted to an astounding $45 billion USD).[8]

When the US intelligence community makes special note of an economic plan that likely does not have any real chance of coming to fruition until, at the earliest, 2050, this attention deserves greater scrutiny. The reality is, in its most dangerous formation, MIC could be the strategic initiative that finally and conclusively brings a real fusion of national security and international political economy as global threat. For example, given China's persistent and intensive investment engagement over the last decade throughout Africa, when applied to MIC, it is not entirely far-fetched to envision a China that controls the global cobalt market.[9] This control would de facto deliver to China influence over most of the world's high-tech modern electronics. This one industry alone carries stark consequences for the United States when considering the ambiguous dual-use (civilian and military) technology market. Since the emergence of this market, it has been, by and large, the sole domain of American control and dominance. Shifting this control over to China would have cascading effects on national security and intelligence that are almost impossible to underestimate and extremely difficult to predict and counter.

To a certain degree, the longevity aspect of MIC's ultimate danger is working against the warnings of the US intelligence community. While no one is outright dismissing these worries per se, the tendency to push them to the back of the line is currently winning the day. To be sure, a swath of competing and contradictory data coming out of China itself gives the more dominant camps the ammunition they need to stay focused on the here and now. As a result, the battle cry of "MIC is nothing a paper tiger" carries quite a bit of weight in American corridors of power when it comes to its long-term national security damage potential.[10] To be sure, some of that data is quite tempting:

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8 McBride and Chatzky, "Is 'Made in China 2025' a Threat to Global Trade?"

9 McBride and Chatzky, "Is 'Made in China 2025' a Threat to Global Trade?"

10 Anjani Trivedi, "China's Made in 2025 Plan is a Paper Tiger," *Bloomberg,* December 15, 2018, https://www.bloomberg.com/opinion/articles/2018-12-16/china-s-made-in-2025-industrial-ambitions-are-a-paper-tiger.

- China itself has openly commented on how it might "delay" certain MIC target goals and some reports discuss whether it might be better to replace MIC ultimately with other plans.
- China's research and development expenditures, which are crucial to any real success of MIC, remain far below advanced economies like those of the United States and Japan. This data point is commonly used as an overall indicator of how efficiently and wisely a country spends its money.
- Many of the top CEOs in machine making around the globe have commented that while China has risen to the third or perhaps even second tier, it still has a very long way to go before it can compete in the top tier with the globe's leading countries.
- Even specific industry targets, like new energy vehicles, illustrate the mediocre capabilities of China. Long striving to hype itself as a future "Tesla killer," the reality is that China not only has been unable to create a domestic electric car champion, but it ultimately called in Tesla engineers to try to help right its own ship—a humbling maneuver for sure.[11]

Further pushing this MIC-pessimist camp forward are classical economic arguments underpinned by skepticism over the ability of autocracies to ever be adaptive and innovative enough to counter natural demographic hurdles. While China aims to become a global tech producer-leader by the second half of the twenty-first century, that same time period is when the negative consequences of its one-child policy could go into effect. Because of this radical policy, the working-age population in China during the last fifty years of this century will likely be halved. Additionally, and more disconcerting, the share of the population over the age of seventy will effectively triple, which is why the rigidity of the one-child policy was quietly but decidedly softened.[12]

Classic economists scoff at the idea that MIC is the plan that can help remedy these problems, especially given MIC's ambitious strategies to engage a global free-market capitalist system is entwined within what is still, to them, a repressive autocracy that lives more often on falsified economic data to prop up its global position. This skepticism is built upon the fact that while China is no stranger to government economic intervention, it is

11 Trivedi, "China's Made in 2025 Plan is a Paper Tiger."

12 Keith Balmer, "Can China Really Become the Technology Kingpin?," *Investment Week,* May 7, 2019, https://www.investmentweek.co.uk/investment-week/opinion/3075178/-china-main-player-technology.

unfamiliar with creating endogenous growth through innovation. From this angle, MIC comes off as nothing but a giant centrally-planned exercise in modern industrialization with a tech edge.[13] If MIC is, in fact, nothing but that, then this camp argues the nature of autocracy will actually undermine its success rather than power it. While China may be able to provide nearly unlimited sources of funding for its goals, it is not funding that creates human capital. And human capital is still something that China severely lags behind in, mainly because authoritarian regimes have a rightful fear of encouraging innovative human capital in general.

Backing up that premise is a simple but probing look at China and its applications for new patents. Because more patents are filed in China than anywhere else in the world, the general impression China is trying to push is that it is home to a vibrant, ambitious, and inventive people. But the reality seems to be quite different: The vast majority of those patent filings apply only to the domestic environment and do not have international reach and scope at all.[14] Because of that, the skeptics' camp feels confident in labeling China, and all of its subsequent projects like MIC, as nothing but innovation fools' gold. Generally encapsulated by the economic dilemma known as escaping the middle-income trap, if MIC can empower China to do just that, it will be the first repressive authoritarian state to achieve such a success in history.[15]

It is entirely possible that, in the end, the skeptics' camp will prove to be right, and MIC amounts to yet another authoritarian "revolution" that is a great and mighty wind signifying nothing. The one small but significant red flag remaining is the simple idea that China is equally aware of this and is not developing a plan to address present-day issues with present-day solutions. Not needing to remedy problems *right now* means that the development of long-term plans can take priority. The foundation of most criticisms of MIC currently seems to rely exclusively on where China is today, not where it aims to get to tomorrow. If China has the mindset, framework, and intention to slowly evolve and progress toward the goals of MIC, then it is entirely

13 Balmer, "Can China Really Become the Technology Kingpin?"

14 Lulu Yilin Chen, "China Claims More Patents than Any Country – Most are Worthless," *Bloomberg News,* September 26, 2018, https://www.bloomberg.com/news/articles/2018-09-26/china-claims-more-patents-than-any-country-most-are-worthless.

15 Balmer, "Can China Really Become the Technology Kingpin?"

plausible that its current contemporary hurdles are not nearly as devastating as Western skeptics seem to think.

A perfect example of this is the fact that all formal mentions of MIC were dropped from the opening session of the National People's Congress in 2019, as mentioned earlier. Skeptics were all too quick to jump on this fact as immediate proof that MIC was an overreach and is already suffering under the weight of its projections matched against contemporary obstacles. However, while Chinese premier Li Keqiang may not have formally uttered the letters "MIC," the detailed content and essence of his opening speech was literally framed by its goals and objectives.[16] This is a very subtle tactic that tends to run through Chinese foreign policy in general. When facing harsh criticism or upsetting strategic partners like the United States, it will give the United States what it wants to hear while having no real intention of slowing down its objectives. The question should not be if this means MIC is already losing credence within China's Communist Party. The true question is whether this rather simplistic strategic move—talking sweet words over steel actions—might have a convincing impact on American observers within the corridors of power. If it does, it may be because of the American tendency to continually lean on the presumption of its own technological and innovation preeminence.

Could MIC End American Dominance?

As mentioned earlier, it is not entirely surprising that the intelligence and defense communities view China's ultimate goals through a more skeptical lens. Perhaps more than anyone, the US defense community has been wary of how "societal improvement projects" on a global scale could allow China to morph into a "digital authoritarian state."[17] So, on the one hand, it is fascinating to see certain groups aware of and vocal against the potential national security consequences of strategic economic initiatives. But, on the other hand, this long-sighted prescience breaks down when it comes to actual advice given on how to deter the problem. China's becoming the new global leader to other countries when it comes to dangerous artificial

16 Issaku Harada, "Beijing Drops 'Made in China 2025' From Government Report," *Nikkei Asian Review,* March 6, 2019, https://asia.nikkei.com/Politics/China-People-s-Congress/Beijing-drops-Made-in-China-2025-from-government-report.

17 Nicholas Eftimiades, "China's Theft and Espionage: What Must be Done," *Breaking Defense,* April 19, 2019, https://breakingdefense.com/2019/04/chinas-theft-espionage-what-must-be-done/.

intelligence technology transfers, especially to those not maintaining an alliance relationship with the United States, is crucial.

One such area that shows both the future strategic capacity of MIC while simultaneously revealing the economic misfocus of America is the progressive creation of China's own version of GPS. Since 2017, China has aggressively built and deployed a series of navigation satellites. The deployment schedule has been so assertive that China can already offer willing partners a mostly functioning alternative to America's GPS capabilities. The American complaints so far have focused merely on how China should not be trying to leverage new commercial partners away from the American GPS system. They should be more concerned about how this leverage could be strategically used: access to the Chinese GPS alternative in exchange for partnering with Chinese firms exclusively to accelerate AI tech transfer, digital infrastructure, and equipment gains.[18] The potentiality for this in terms of surveillance and monitoring is almost limitless when governed under high-tech state control.

Another example is the future battle for 5G supremacy. If MIC can succeed in propelling China into the leadership position for not just developing but transferring 5G technology across the globe, the strategic power dynamic of this eventuality is immense. Unlike the United States, China has 650 million active internet users in desperate demand for 5G speed, *and* it has a mutual infrastructure improvement project in the Belt and Road Initiative (BRI). The BRI is a road and maritime linking initiative that has already worried enough Western observers about the future reach and influence of Chinese power, from the South China Sea to Western Europe. If MIC allows China to meld 5G dominance into the BRI, then it may have a one-two punch that signals not just economic self-sufficiency but strategic power influence across a vast landscape that America currently does not dominate. It means a Chinese model of state political control and internet semi-freedom could be traded for greater speed/access and the monitoring of digital histories. Ultimately, what this shows is that China has deftly learned over the past

18 Alex Capri, How a Growing U.S.-China Rivalry Is Reshaping the Global Tech Landscape," *Forbes*, December 9, 2018, https://www.forbes.com/sites/alexcapri/2018/12/09/how-a-growing-u-s-china-rivalry-is-reshaping-the-global-tech-landscape/#3275b134398e.

two decades something that was once the exclusive domain of the United States: "civil-military fusion."[19]

To date, no country has ever come close to copying this American success. The gradual advancement of the Chinese economy over the past four decades, however, has produced a unique state capability to enact initiatives like BRI and MIC, both of which have huge dual-use, civil-military fusion aspects embedded within. China is now potentially showing how economic success can lead to military/defense power expansion. Unfortunately, Western focus seems stubbornly intent on preventing an economic success train that has already left the station, focusing instead on present-day economic access strategies that may ultimately backfire, while underplaying the long-term military-strategic potentiality of plans like MIC.

The American analyses are founded upon a world view in which the China-America relationship is immutably a first priority.[20] But what if the end goal is instead about how China can be positioned in South Asia, the Middle East, Latin America, and Africa? It seems clear that China was at least partially successful in developing programs like MIC by relying on American short-sighted arrogance that only saw China as a "copycat" nation incapable of competing with American innovation and by not seeing the full threat-complex embedded within when it concerns national security and intelligence. This leaves a critical flank exposed and vulnerable: Leverage and influence-peddling technology innovation—completely uncoupled from concerns about democratic principles, human rights, and civil liberties in countries not very friendly to the United States—is a brand new doom for American strategic interests.[21]

Now, caught somewhat unprepared and unfocused on the long-term goals, it is the United States being advised to pursue activities like "shielding" and "stifling" in order to prevent continued Chinese acquisitions and advantage-building.[22] As mentioned earlier, these efforts are not just too little, too late but also erroneously emphasized as the United States still likes to think of

19 Capri, "How a Growing U.S.-China Rivalry Is Reshaping the Global Tech Landscape."

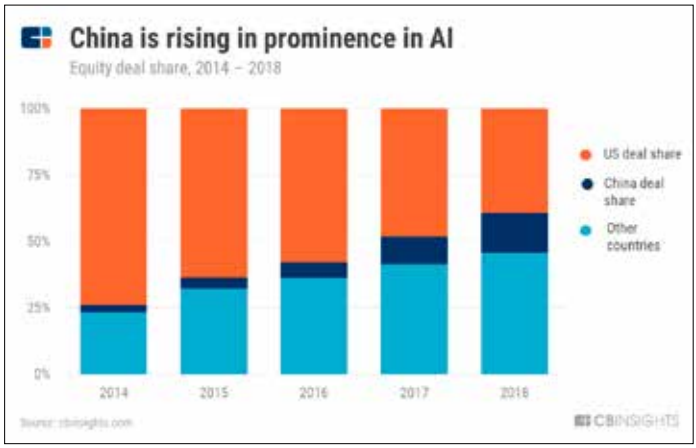
20 C.H. Tung, "America and China Need Each Other," *The Diplomat,* February 8, 2018, https://thediplomat.com/2018/02/america-and-china-need-each-other/.

21 Robert D. Atkinson and Caleb Foote, "Is China Catching Up to the United States in Innovation?," *Information Technology & Innovation Foundation,* April 2019, http://www2.itif.org/2019-china-catching-up-innovation.pdf.

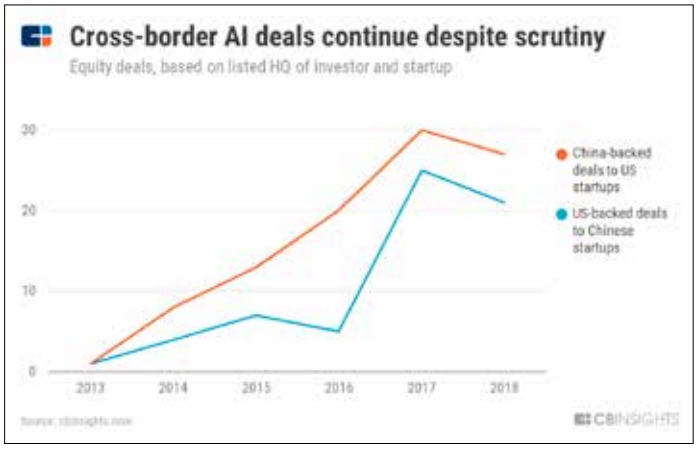
22 Anthea Roberts, Henrique Choer Moraes, and Victor Ferguson, "The US-China Trade War Is a Competition for Technological Leadership," *Lawfare,* May 21, 2019, https://www.lawfareblog.com/us-china-trade-war-competition-technological-leadership.

itself as the main point of focus for long-term Chinese strategies. As long as that remains the case, not only will the United States be unlikely to reverse the current trends in favor of Chinese cyber technology gains, it will remain blind to the long-term processes that will see American strategic supremacy usurped in critical global regions by Chinese diplomatic pragmatism.

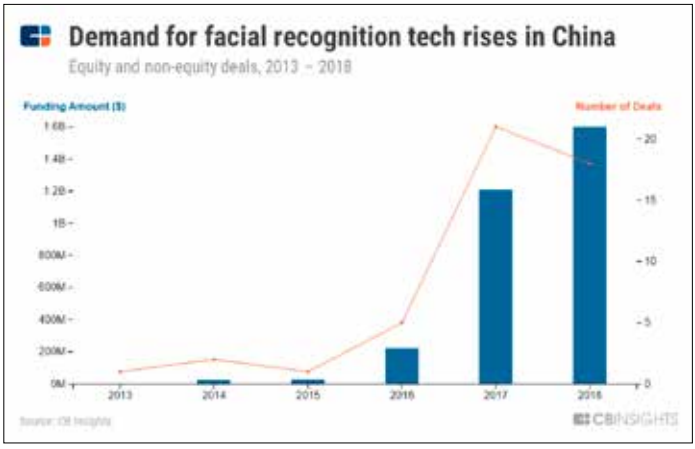
Once dominant in emerging AI, America has seen its global share drop over the last five years, as shown below.



MIC was always formulated to be an outward-in economic model for Chinese development *and* an inward-out investment/engagement model for Chinese power.



Finally, if there were any remaining skeptics about the full strategic capacity of MIC far beyond economic development, one only need see how China has behaved the past five years when it comes to facial recognition technology.[23]



From the very beginning, Chinese economic development was made to progress in a manner that kept the Chinese state whole and intact.[24] Consequently, projects like MIC should have always been seen as a dual-use project not exclusively focused on economic sustainability. Some impressive Global South scholarship is being done on this angle, making the important connections between China, AI, MIC, cyber, and strategic influence. Unfortunately, to date, much of that research has been little noticed:

> China is spending vast sums on research related to AI technologies, as cyberpower sits at the intersection of a number of its national domestic and foreign policy priorities. China's international cyber ambitions are closely paired with its existing and growing use of AI technologies for surveillance and social control at home. This is evident from the intrusive AI-driven surveillance infrastructures being employed in Xinjiang state and that of the Great Fire Wall (GFW). Although American companies took an early lead in AI, for example, as measured by the application of machine learning

23 "China is Starting to Edge Out the US in AI Investment," *CBInsights,* February 12, 2019, https://www.cbinsights.com/research/china-artificial-intelligence-investment-startups-tech/.

24 Esther Pan, "The Promise and Pitfalls of China's 'Peaceful Rise,'" *Council on Foreign Relations,* April 14, 2006, https://www.cfr.org/backgrounder/promise-and-pitfalls-chinas-peaceful-rise.

> and number of AI patents registration, China is closing the gap with the U.S. At the current technological advancement rate, it is predicted that by 2025 China will surpass the U.S. and by 2030 it will dominate the industries of AI. This poses significant implications to the economic, political, security, cultural, and human rights global order.[25]

Interesting how the supposedly distinct Chinese AI goals and strategic foreign influence gains perfectly coincide with the MIC timeline. For China, there is no point in separating economic development from national security from global influence. They are three sides of the Chinese triangle. This is why literature searches can find equal numbers on AI start-ups with facial recognition companies as technology transfer deals with advanced surveillance tech.[26] Just how technologically diverse and strategically expansive could Chinese influence become if the maximum utility of MIC comes to fruition?

Is China the First Multipolar Power Influencer?

It is important to recall that China has proposed MIC while already actively engaged in technology transfer around the world. Its supposed "low-end manufacturer" status has not made it any less attractive as a commerce partner to many countries that often find themselves somewhat limited, even ignored, by traditional Western economic powers. One of the biggest areas China has achieved leadership status is in the transfer of surveillance technology. In many ways, it was a natural outcropping of domestic economic success: China's political system employs what are considered heavy-handed repressive measures to ensure greater control over public activism and opinion making. Is it any wonder that other countries around the world, equally concerned about opposition voices and grassroots activism, might suddenly become interested in learning at the feet of the global leader and ultimately become equipped by it? A quick survey on financial deals concluded over the past five years shows how China has aggressively marketed and transferred surveillance technology to countries like Ecuador, Zimbabwe, Pakistan, Uzbekistan, Kenya, and the United Arab Emirates, with replicas

25 Arthur Gwagwa, "AI, Foreign Policy, and National Governance Impact: Focus on China," *Modern Diplomacy* May 10, 2019, https://moderndiplomacy.eu/2019/05/10/ai-foreign-policy-and-national-governance-impact-focus-on-china/.

26 "China is Starting to Edge Out the US in AI Investment."

of the official network (also Chinese made and marketed) already sold to the likes of Venezuela, Bolivia, and Angola.[27]

Critics worry that such activity is not simply global free-market capitalism filling a niche. It is not the proper application of surveillance technology to help necessary initiatives like counter-terrorism and battling home-grown extremism and criminal activity. Rather, the worry is based on the fear that China is de facto creating a future of tech-driven authoritarianism, where its technology transfers are purposely being deployed so as to limit the organic expression and development of nascent democratic movements. Obviously, massive infrastructure and global development initiatives like MIC and BRI will only intensify and expand opportunities for this kind of technology-transfer initiative.

The difference in how China views global engagement vis-à-vis countries like the United States is significant. China has been adamant for a long time that it is only concerned by productive and fruitful economic transactions. Huawei, the Chinese technology giant often at the heart of most of these international worries, unintentionally summed up the overall Chinese foreign engagement philosophy in a single sentence: "Huawei provides technology to support smart city and safe city programs across the world. In each case, Huawei does not get involved in setting public policy in terms of how that technology is used."[28] First, it would not be an exaggeration to replace the word "Huawei" with the words "People's Republic of China."[29] Second, recall the aforementioned "dual-use" technology so prevalent in today's global market: It is fairly simple to convert technology sold under commercial purposes so that it suddenly becomes extremely effective in carrying multiple purposes, including military and intelligence. Keeping these two parameters in mind, Huawei's statement is a de facto admission to potential buyers that they will know *all* of the potential uses of the technology transfer. All China demands is that it has plausible deniability down the road if the technology ends up being used for primarily non-commercial uses.

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27 Paul Mozur, Jonah M. Kessel, and Melissa Chan, "Made in China Exported to the World: The Surveillance State," *New York Times,* April 24, 2019, https://www.nytimes.com/2019/04/24/technology/ecuador-surveillance-cameras-police-government.html.

28 Mozur, Kessel, and Chan, "Made in China Exported to the World."

29 Keith Johnson and Elias Groll, "The Improbable Rise of Huawei," *Foreign Policy,* April 3, 2019, https://foreignpolicy.com/2019/04/03/the-improbable-rise-of-huawei-5g-global-network-china/.

In the past, China faced some criticism about how its initial massive foray into the global economy was to target natural resource nations that might help feed its insatiable energy needs. Over the past half decade, for example, many countries across Africa have started to ask if China's purchasing of natural resources is really creating any positive economic development for the African back end.[30] China's new initiatives like MIC, however, clearly carry the potential to snuff out such criticism before it begins in greater earnest. MIC could sell technology transfers not just as today's economic progress but as de facto future of governance capabilities.[31] For American critics, that message means the future of governance as envisioned by China: the use of AI technology to control the masses and limit challenges to state power, hindering grassroots activism. Perhaps worse still, the way that China seals the deal on such transfers increases its continuing global influence leadership position. Namely, it offers loans to countries that in the past would have never been able to afford such technology. Also, the nature of China's domestic political system means the world market has almost no capacity to follow transparency or accountability for such transfers.[32]

Another reason to keep concern high is the reality that China has, plain and simple, out-strategized and out-witted the United States on a number of issues across the diplomatic, legal, and commercial levels of AI technology transfer. As a result, America finds itself in the awkward position of protesting Chinese strategy innovation even while needing to admit that by and large China is accomplishing its goals without breaking any laws. Economic espionage and IP theft accusations notwithstanding, China has leveraged US free-market principles and laws to naturally increase its sizable leverage. For example, a major element of American innovation and ingenuity is the ability to attract private foreign investment and backing.[33] This simple rule perfectly aligns with the Chinese strategy of dumping hundreds of millions, if not billions, of dollars into American tech start-ups not so much as to encourage American innovation as to simply get access to early-stage technology. It

30 Eleanor Albert, "China in Africa," *Council on Foreign Relations,* July 12, 2017, https://www.cfr.org/backgrounder/china-africa.

31 Mozur, Kessel, and Chan, "Made in China Exported to the World."

32 Mozur, Kessel, and Chan, "Made in China Exported to the World."

33 Michael Brown and Pavneet Singh, "China's Technology Transfer Strategy: How Chinese Investments in Emerging Technology Enable a Strategic Competitor to Access the Crown Jewels of US Innovation," *Defense Innovation Unit Experimental,* January 2018, https://admin.govexec.com/media/diux_chinatechnologytransferstudy_jan_2018_(1).pdf.

then can pursue its decades-long classic art of reverse engineering so as to produce a Chinese equivalent capable of being marketed to second-and third-world countries not typically on the radars of major industrial/tech nations. The data shows, in fact, that the facilitation of technology transfers from the United States to China (the first step in China's long-term strategy to achieve its future global influence position) is barely powered by cyber espionage and theft. Instead, the key success strategies have been foreign direct investment, venture capital investments, joint ventures, licensing agreements, and talent acquisitions, all of which comply with American law.[34]

Additionally, it has been China, not the United States, that has been committed to a long-term strategy that is holistic and focused on all of the major emerging technologies likely to become the dominant driving force of a future global economic market. America has simply chosen to not dedicate as much time, focus, and money into this approach as China has. Worse still, the United States has been cavalier in thinking reverse engineering is a poor, distant cousin to innovation that can never morph into genuine original technical genius. That seems to be a grave miscalculation. Given that China by 2050 may be 150 percent the economic size of the United States, this short-sightedness is almost unforgivable.[35]

This background makes all of the current media hype over Chinese intellectual property theft and economic espionage somewhat suspect. It is not that China should be openly allowed to exploit such illegalities, but it is an inaccurate distraction to try to depict Chinese progress in technology as merely a result of it being successful in "stealing and copying" from the Americans. To believe that might indeed make American corporations feel better, but it does not truly address the strategy innovation with which China has rapidly advanced itself. It also is an example of not learning from history: There is ample evidence that both South Korea and Japan employed an imitation to innovation strategy that now makes them both stable and significant players on the global economic market.[36] China may not be an ally in the mode of South Korea and Japan today, but the behavioral lessons learned are still remarkable.

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34 Sean O'Connor, "How Chinese Companies Facilitate Technology Transfer from the United States," *US-China Economic and Security Review Commission,* May 6, 2019, https://bit.ly/3adkei1.

35 Brown and Singh, "China's Technology Transfer Strategy."

36 Atkinson and Foote, "Is China Catching Up to the United States in Innovation?"

And before anyone can think these plans are nothing more than just keeping up with the United States or, again, basing Chinese positioning only through Americo-centric eyes, all of these initiatives have caught the attention of Western Europe with perhaps even more shocking concern. The reality is that most EU defense analysts feel the timetable for China to catch up to and surpass European technology capabilities is much, much shorter than the American timetable. Unfortunately, the strategies that have worked so effectively in catching the Americans off-guard are even more invasive across the European Union. It admits that China simply jumped more quickly on investment into dual-use technology that would power a future civil-military integration, largely through the familiar-sounding "whole-of-government" investment and protective regulatory framework and getting early-stage access to the best of the European technology innovation organizations.[37]

Ironically, some of the criticism in Europe is not so much the American complaint about theft and espionage but is founded more on the unfair advantages that an authoritarian system has over a mature democracy. Since economic innovation in a democracy tends to mostly be a bottom-up, independent process, it creates a much smaller intersectional alignment between the three aspects usually powering innovation: industry, government, and academia. Since China employs a top-down authoritarian model for economic innovation, it naturally creates a much wider, deeper, and broader "middle" where the three aspects intersect (think Venn diagram with three interlocked circles of industry, government, and academia).[38]

Interestingly, and perhaps disconcertingly to the United States, there are at least some nationalistic cracks in the EU façade when it comes to countering or joining Chinese progress. Germany—more than any other European nation—has clearly decided its own future economic tech development is achieved more efficiently by being a reliable partner in conjunction with China. In fact, China has even created specific new characters in Mandarin to directly relate to both "smart manufacturing" and "Industry 4.0," terms that really only come into play with explicit Sino-German negotiations. This is not just China-driven and initiated either: Germany created its own

37 Meia Nouwens and Helena Legarda, "Emerging Technology Dominance: What China's Pursuit of Advanced Dual-Use Technologies Means for the Future of Europe's Economy and Defence Innovation," *China Security Project – The International Institute of Strategic Studies,* December 2018, https://www.merics.org/sites/default/files/2018-12/181218_Emerging_technology_dominance_MERICS_IISS.pdf.

38 Nouwens and Legarda, "Emerging Technology Dominance."

implementation partner/development agency (GIZ) so as to "create a better framework condition for German and Chinese companies in the field of Industry 4.0 and Made in China 2025."[39] It begs to be asked if there is not even a united Western front when it comes to countering projects like MIC, then how likely will there be resistance from non-US aligned countries that have always felt somewhat lectured to by the United States?

Conclusion

When looking closer to home, China's economic growth morphing into geopolitical leverage is already in model form: Japan, Taiwan, Hong Kong, Singapore, even South Korea and the Philippines are all closely intertwined with the People's Republic, but in a relatively one-way street deal. China maximizes that leverage and over the past decade or so has pushed its thumb lightly down upon its regional neighbors when they pursued initiatives that were not favorable to long-term Chinese objectives.[40]

But even given this reality, Western analysis tends to replace objective and dispassionate conclusions with something more akin to wishful diplomatic thinking. The idea that East Asian countries can offer lessons to other countries more far afield on how to engage China economically but not fall under its political leveraging is not really keeping reality front and center. The mere fact that China has not occupied or taken over its neighbors is not so much a testimony to these neighbors' continued strategic strength to keep China at bay as it is giving witness that China is not obsessed with power expressed in the traditional militaristic ways so favored by the United States. China's preferred model is clearly the one discussed earlier with Germany. Rather than being seen as a geostrategic threat that must be nullified, Germany has thrown its weight behind a mutually beneficial economic alliance and basically has turned a blind eye to strategic/diplomatic concerns. The ultimate consequences of this strategy, played out through the twenty-first century, could significantly rewrite the current global order founded upon American leadership that is equally weighted to economic might and geo-diplomatic pressuring.

Ultimately, the United States needs to be concerned about one day waking up and suddenly realizing its global leadership dominance has been replaced

39 Nouwens and Legarda, "Emerging Technology Dominance."
40 Nouwens and Legarda, "Emerging Technology Dominance."

by many other countries that have basically adopted the "Huawei" model of foreign policy. As noted, Huawei is not just an incredibly successful and prosperous Chinese conglomerate based in and operating from an authoritarian state that balks at the idea of embracing a full set of American democratic values. It has, in fact, prospered largely *because of* how much it has been able to function within the rules and restrictive processes of that regime.[41] For Americans, it might seem like Huawei was given a Faustian bargain: You will only be successful if you acquiesce to Chinese values about power and hierarchy; if you do not accept, you will not be allowed to exist. But this is an American conceit not truly reflective of the situation in China. A Faustian bargain implies reluctance and discomfort in making a compromised decision. Huawei had no dilemma: Its goal was to become a major global economic player, thereby increasing the influence and power of the Chinese state. It has no goals to usurp or replace that power. That is just what American power wishes Huawei would do.

It is entirely plausible that countries throughout South Asia, Africa, and Latin America will be particularly enamored by this Huawei model of foreign policy that can de facto end up creating a Chinese cyber colonization system but powers their own domestic growth and prosperity at home. Thus, protest over such colonization will be minor. To America, it would be anathema seeing a transnational string of countries following ideas like requiring citizens, companies, and organizations to assist state intelligence agencies; not availing citizens or companies with a legal mechanism to not comply with a request given by state intelligence or national security organs; or leveraging civilian entities to conduct intelligence gathering as China does.[42] If those intermittent requirements, however, are offset by rapid technological advances and increased economic development and progress, then it is highly likely other countries will jump at the chance and start to look with great displeasure at the American tendency to tie economic partnership and aid with progress on the democratic freedoms/civil liberties front.

America does not see itself as the one offering difficult Faustian bargains of its own to places like Africa, Latin America, and the Middle East/South

41 Priscilla Moriuchi, "The New Cyber Insecurity: Geopolitical and Supply Chain Risks From the Huawei Monoculture," *Recorded Future,* June 10, 2019, https://www.recordedfuture.com/huawei-technology-risks/.

42 Moriuchi, "The New Cyber Insecurity."

Asia. But, at the local level in these places, it is often characterized this way.[43] It is far easier for America to see itself as the cowboy in the white hat and all the others not going along with it as the villains in the black hats. Post-Cold War, when the United States was the sole superpower, it was simple to get away with. But in the twenty-first century, with projects like MIC and long-term strategic Chinese interests offering up a completely different type of engagement model, maintaining sole dominance of global leadership is no longer an automatic guarantee for America. China's focus on fusing the economic *now* with a geostrategic *later* and the unity between dual-use civil-military technology transfers across numerous countries not aligned with the United States is brilliant strategy, even if also utterly Machiavellian.[44] Current American focus is basically missing the boat on this potentiality. If it continues, the real culprit in creating a global AI network of Chinese cyber colonization, a high technology system of cyber authoritarianism, might be the strategic hubris of the American commercial, national security, and diplomatic communities.

43 Stephanie Savell, "The American Empire's Long Reach," *The Nation,* February 19, 2019, https://www.thenation.com/article/america-empire-war-terror-counterterrorism/.

44 Moriuchi, "The New Cyber Insecurity."