Q & A

Jonathan Hillman on the Digital Silk Road's Increasing Importance

The scholar talks about his new book, why the Digital Silk Road is now more important than the Belt and Road, and how everyday Chinese citizens are pushing back against digital privacy concerns.

BY JAMES CHATER — OCTOBER 10, 2021

Jonathan E. Hillman is a senior fellow with the economics program at the Center for Strategic and International Studies and director of the Reconnecting Asia Project, one of the most extensive open-source databases tracking China's Belt and Road Initiative (BRI). Hillman is also the author, most recently, of The Digital Silk Road: China's Quest to Wire the World and Win the Future *(Harper Collins 2021), due out this month, and* The Emperor's New Road: China and the Project of the Century *(Yale University Press, 2020). A graduate of Brown University and Harvard's Kennedy School, Hillman has served as a researcher at the Belfer Center for Science and International Affairs and a Fulbright scholar. What follows is a lightly edited Q&A.*

Jonathan Hillman.
Illustration by Kate Copeland

Q: How did you come to work on the Digital Silk Road?

A: It's really a natural extension of the work that I've been doing at CSIS for over five years tracking China's Belt and Road initiative [BRI]. Digital infrastructure has been there all along, and I just wasn't paying enough attention to it. It's often included in things that we don't think about as being digital, so when I went to visit the port of Piraeus in Greece [the majority Chinese-owned port in Athens], your eye is naturally drawn mostly to the shipping containers, the ships and the maritime dimension of that project. But there's a whole network infrastructure there that has been overhauled and rebuilt by Huawei. So, the digital component is there, but it's often less visible.

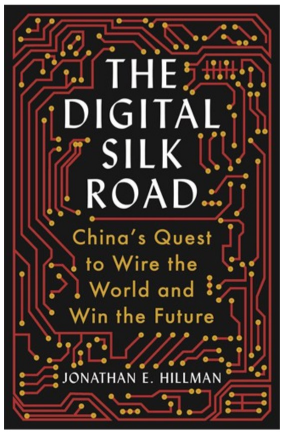
Toward the end of writing my first book [The Emperor's New Road: China and the Project of the Century] on China's BRI, I make the point that this digital dimension might actually be more consequential. And so I spent about two or three years really focused on that set of activities. There's still a lot more to cover and explore there, especially in the aftermath of the pandemic. But the set of activities that make up the Digital Silk Road are important commercially and raises all these other interesting policy questions.

How hard was it to do the research for the book during the pandemic? Did that quite tangible difference in methodology — not being able to visit places — focus the way you were thinking about these questions?

It was a real challenge. I had all of these exotic travel plans, and I was really excited to go to visit more projects. I was even going to get on a boat and watch as they lay a subsea cable. I

was going to do that type of field work. Those types of visits are really important, and there's really no substitute for it. I benefited, I guess, from not being able to travel in other ways though, in that it focused me a little bit. I found it easier than pre-pandemic times to set up discussions and interviews with people. Then I tried to be creative and do some research that was more virtual-based; doing training courses offered by large surveillance companies and trying to get into some of the material that way. It was a challenge, but because it is a digital set of topics, the exploration in a way became, fittingly, more digital.

Give us a short background to China's Digital Silk Road. You worked previously on the BRI. How synchronized were the origins of both projects or did the Digital Silk Road emerge out of the BRI?



Hillman's latest book, "The Digital Silk Road: China's Quest to Wire the World and Win the Future," comes out this month.

China was doing infrastructure projects before the BRI was announced in 2013. And it was certainly doing digital infrastructure projects too before that. The Digital Silk Road is kind of an addition to the BRI, and there have been many additions. The BRI is this loose concept that has been steadily expanded. One of the advantages of that is it can accommodate basically anything; it can evolve to meet the needs of the time. But the Digital Silk Road is not just another ornament on a Christmas tree. It is a real focal point of the BRI now, along with the Health Silk Road. Those are probably the two most emphasized dimensions right now.

And to its evolution, it was first mentioned in 2015, but it's not like there's a criteria that sort of certifies projects as being part of the Digital Silk Road; it's a set of activities. And I think of it very loosely as the technology dimension of the BRI, to really oversimplify it. But I think within that broad set of activities, there's a few that seemed to me to be really important and picking up in their level of activity, so I tried to focus on a few of those in the book.

This is the age-old criticism of the BRI and, it seems, of the Digital Silk Road too: they're so broad that they can encapsulate any project the Chinese government wants them to. Ignoring for a moment the geography or the technology used in a specific project, is there an underlying logic or common thread that runs through the Digital Silk Road projects?

Yeah, I think this set of activities represents an important inflection point, and it's a continuation of a longer goal, which is to basically make China more self-sufficient in technology and to reduce its reliance on foreign providers. What's significant about this set of activities now is that not only is that happening domestically, but China is actually increasing the reliance of foreign countries on Chinese providers. That's an important and consequential shift. You see it across the board, from wireless networks, smart cities, subsea cables, data centers and even satellites. There is that overall reduction of China's own dependence and an increase of the world's dependence on Chinese providers for these systems.

You mentioned that the Digital Silk Road and Health Silk Road are becoming even more central to China's international strategy. There's been reporting that overseas infrastructure projects under the BRI are slowing. Do you think the Digital Silk Road has surpassed the original BRI in its importance now?

BIO AT A GLANCE	
BIRTHPLACE	Massachusetts, USA
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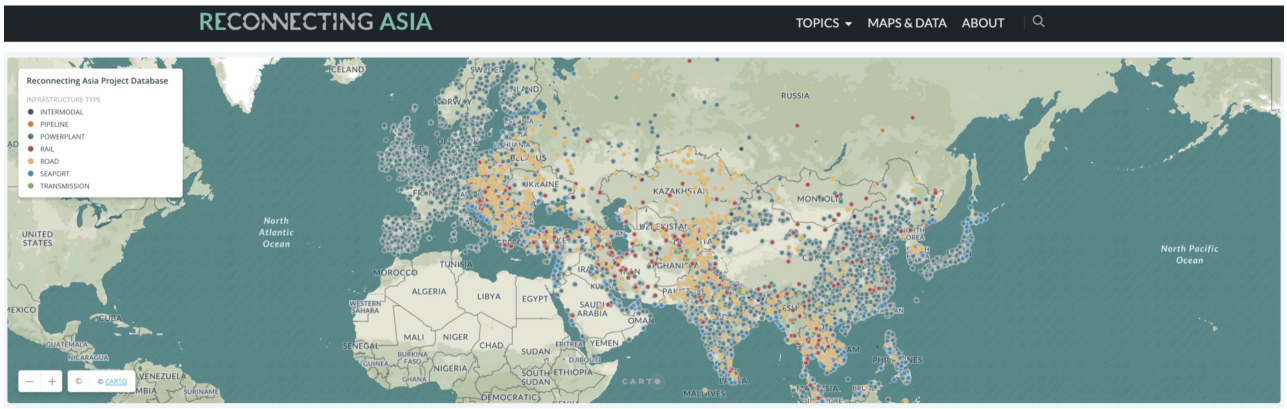
Yeah, I think it has. It's proportionately more important now than it was before the pandemic. The BRI pullback predates the pandemic; there was a very significant pullback in 2019. The two largest sectors of activity then, transport and energy, are still the largest from what I've seen. And that fits with China's own capabilities of its large state-owned enterprises. They have massive companies that have built lots of those projects at home. And I think we're seeing something similar happening now with some of the digital infrastructure. China has its own domestic digital infrastructure push, Xi Jinping talks about the importance of 'new' infrastructure — which is basically digital infrastructure — and the more that those investments are made domestically, the more that you'll see even more of that pushed out overseas.

But the international environment is also more welcoming to digital infrastructure now than it is to large transport and energy projects, as a lot of countries are facing financial challenges; they don't have the fiscal space to borrow to do those huge projects. There's some operational benefits to digital infrastructure too in that it's a little bit less visible. The project might cost a little bit less. And the pandemic has also underscored that you don't want to be on the losing side of the digital divide. So all of that makes the Digital Silk Road an even more important set of activities.

Let's zero in on China and how debates around technology have emerged and developed historically, to the genesis of the Digital Silk Road. It does seem like there's an underlying connection between the development of communications technology and national security within China. Has that always existed or has it emerged more recently?

There's definitely a longer history there, and in a way I think some Chinese officials saw the potential security implications of communication technologies before their American or foreign counterparts. To put it more generally, there was this over-optimism at the end of the Cold War where the prevailing assumption was, "we're going to just connect more places and that will spread freedom", I mean to really oversimplify it, but maybe not too much. That was the core belief. Simultaneously, people were predicting the demise of the CCP — "Oh, these fax machines or cell phones or bloggers are going to have a real impact" — everything was believed to "have an impact."

But the CCP took warnings of its own demise pretty seriously, and they set out to use these technologies in a way that would enhance their control. This was made a priority. And I think there were some events internationally that were important too, in terms of thinking about some of the international security implications. The First Gulf War was a pretty vivid demonstration of a new set of command and control technologies. The Taiwan Strait crisis of 1996 was another moment where the Chinese realized that they didn't want to be dependent on GPS. All of that drove home this desire to develop an independent set of technologies or reduce dependence on foreign providers. It took decades in the case of GPS to make their alternative, but they pulled it off and completed their own global navigation satellite system last year. So it does seem to be a pretty long, deeply held objective pursued through successive sets of leadership.



CSIS' Reconnecting Asia Database includes over 14,000 infrastructure projects across the Eurasian subcontinent since 2006, including many of China's BRI projects. *Credit: CSIS Reconnecting Asia Project*

There's an anecdote in the book, where you mention that in the marketing materials for technology solutions by Chinese companies, there's often differences in the language used for a Chinese audience relative to a foreign one. Could you speak to that difference? How robust do you think the discussion is within China around some of the bigger questions these technologies throw up like privacy?

There are definitely concerns about the use of facial recognition technology in China and also data security. There have been several pretty high profile revelations of people's personal data being exposed. Some of the safe city systems had been vulnerable with data left unprotected. And at least based on what I've seen, there's a higher willingness to push back against the use of facial recognition and some data collection by private companies. There's that distinction between the level of resignation that the government is going to use those capabilities, but a greater willingness to push back against private companies that use them.

One of the interesting cases that I talk about is the example of a law professor who goes to a zoo. He gets to the zoo and finds that they're moving from doing some kind of biometric fingerprint entry to doing facial recognition, and he ends up filing a lawsuit. That's interesting because there is more discomfort there than we assume from the outside, and some questions are still being litigated around how this stuff should be used.

When I took one of the courses that are offered by Hikvision — the largest producer of surveillance cameras in the world — I was struck by the total lack, the total absence of safeguards of these capabilities. These are courses that are designed to help people install and use these systems. All of the instructions were geared around trying to help you see more, see better, without even the slightest warning like, "check local regulations"; that really stood out to me. On the one hand, it's a short-term advantage for some of these providers that just don't have those safeguards because they know they're willing to sell to anyone and they don't make that part of their business concern. But there are longer term risks to them. If there aren't safeguards that are properly thought out and made available in a place where this stuff is being used, we could see a backlash around the deployment of this technology that doesn't have appropriate social safeguards. That should provide an opportunity to provide safer alternatives.

There's a thread in your book, which is encapsulated by the observations you made earlier about when you visited the Port of Piraeus in Greece, about how the natural inclination is to look at the very physical components of infrastructure projects, like ports and railways. But the point you make is that what underpins a lot of the quote-unquote "invisible" digital infrastructure projects is *also* very physical: servers, data centers. Is that a discussion you think is becoming more prevalent with concerns around data sovereignty?

This is one of those realities that the techno over-optimists of the post-Cold War triumphant moment overlooked. They thought new communications technologies were

really beyond the reach of states. But at the end of the day, all of those technologies depend on physical infrastructure that resides within the boundaries of states; even satellites are not outside the grasp of a country's laws. The internet has a physical footprint. And depending on where we talk about, there are some trends toward data localization, building more infrastructure to house and store data locally. That's something that I think favors the Chinese approach to digital infrastructure. And in one sense, it reaffirms their own approach, but in another it advantages their companies because they're willing to provide even small data centers.

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Huawei literally has shipping container size data centers that they'll go set up and the Chinese government will sometimes even pay for them with grant money like they did in Serbia. The question then becomes: are you going to say no to the free data center from another country? I would, but I think you have to wonder what's in it for them. You can see why that's a hard thing to turn down. This is an ongoing challenge, and competing is really about providing more attractive alternatives.

How should businesses strike a balance between the imperative to protect their data and information, and the imperative to operate a financially sustainable business? This is not just related to data, but we've seen as a result of the recent regulatory crackdown that some companies are thinking of setting up separate entities for Chinese clients, data and operations, and another entity for elsewhere. Is that, in your view, a good thing? How should they navigate between those two really important motivations?

That's a huge question. One of the challenges is that the U.S. hasn't put forward its own data protection regime and there's a need to do that on its own merits. There's a need to do that so it improves cooperation with the European Union, which has its own regime. China is also moving ahead and setting up its own example and creating a lot of challenges for companies that are operating there. This is something I touch on in the book, but one of the challenges that China faces is its overwhelming focus on control. Ultimately, that can limit China's role in global networks. The more hoops it's making for others to jump through; the more it insists on only using Chinese companies, the fewer foreign connection points it allows; that places some constraints on its ability to grow and scale. I see the security angle of it but from a commercial and economic standpoint, there are some big costs there.

You write toward the end of the book that the United States and its allies need to be wary of the risks associated with these technologies, but they equally need to be wary of "overreaction." Do you think the approach of the U.S. and its allies so far has been too reactionary, and not prospective enough? Is there enough discussion about how the U.S. and its allies are actually going to create new frameworks for these technologies?

It's encouraging that there's a lot of coordination and consultation activities underway now that were not underway, even a year ago. A good example is the U.S.-EU Trade and Technology Council meeting that just happened in Pittsburgh. They announced a working group on information communication technologies that includes a focus on expanding development finance for third markets. That basically means, let's make money available to help developing countries get digital infrastructure. The recent Quad meeting also had a statement on technology principles, and they have a coordination group on infrastructure. In

June, the G7 too announced its Build Back Better World Initiative; there's still lots to operationalize there, but one of the four pillars is digital infrastructure.

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BOOK REC *A Swim in a Pond in the Rain* **by George Saunders**

So you do have these new attempts to work with U.S. partners and allies in these areas. It's especially encouraging because this recognizes that you need a proactive, positive alternative; I mean, you really need a commercially offensive strategy where you're going to compete in other markets. You're not going to win this competition just through defensive measures, which is where a lot of the focus had been previously. There's a lot of positive movement, but we should have realistic expectations. In some cases, people are trying to do things that haven't been done before, and coordination with more countries is by nature really difficult. None of this will be fast, easy, or cheap, but it's worth doing.

Who stands to lose the most from a zero-sum approach to U.S.-China technological competition? Is it poorer nations that currently have limited digital infrastructure? Or is it just everyone?

Competition can be a good thing in this space if there are more alternatives that are being offered. This is true in infrastructure as it is in economics more generally. It benefits developing nations to have more options. It gives them leverage to negotiate better deals. Hopefully it will result in more investment and economic activity for them. The purely defensive approach is going to disadvantage those developing countries, because if there's only one offer on the table, and you're not at the table, then I just don't see how that's a viable long-term strategy. That's why these allied efforts are important. It is really all about providing alternatives.

'Competition' is the framing of so many discussions on technology. And the last chapter of your book is titled, 'Winning the Network Wars'. What does it mean to win that war? And is 'winning' the war actually turning it into something that's not framed as competition?

It's not winning the war in the conventional way that we might think about it, like after World War II with people on the streets celebrating. This is something that is going to be more endured and cost-minimized, if done effectively. There's a whole bunch of technical grunt work to be done. It's often about minimizing risks and building resiliency and so, in a way, victory is preventing bad things from happening and expanding the realm of beneficial activity. That doesn't result in a single glorious day. But if done right, it does result in the United States becoming a better version of itself, by making the right investments, by attracting and elevating bright minds, and staying on the leading edge of innovation.

James Chater is a journalist based in Taipei. His writing on politics, foreign affairs and culture from Taiwan has appeared in *The Guardian*, *New Statesman*, *The Spectator* and *Los Angeles Review of Books*. He completed his masters in Modern Chinese Studies at Oxford University. Previously, he also studied at Harvard as the Michael von Clemm Fellow. *@james_chater*

COVER STORY

Pole Position

BY EYCK FREYMANN

In public, Chinese diplomats and climate negotiators deny that they see any link between climate change and geopolitics. But there is a deeply cynical consensus within China's academic and policy communities that climate change creates geopolitical opportunities that China can exploit — and must exploit before its rivals do. Greenland was the proof of concept for this strategy. And it caught the U.S. flat-footed.

THE BIG PICTURE

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BY GARRETT O'BRIEN

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Q & A

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BY ANDREW PEAPLE

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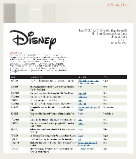

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