The Geopolitical Shaping of Digital ID in Asia: Ten Years of Digital Asia

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Abstract

This article draws attention to a missing dimension in the analysis of digital ID: its geopolitical shaping. After a brief reflection on theory in digital Asia, it presents the most common approach to digital ID as involving judgments about its positive and negative impacts and potential regulatory fixes. While recognizing the utility of this approach, the article presents a complementary framing of digital ID systems focused not on their effects, but on the influences that shape them. It argues that in many Asian countries in the global South, digital ID systems can be influenced by a combination of: technological struggle between the US and China; a desire to open new markets for digital service companies; and the development potential of economic and financial inclusion. After revealing the intellectual roots of the 'geopolitical shaping' frame in three adjacent literatures, it concludes by pointing the way to new avenues of empirical enquiry.

1   Introduction

Ten years is a long time in digital Asia. Looking back at *Asiascape*'s first issues, online cultural expression and political narrative dominated its pages – a kind of media studies approach to understanding digital Asia. My own first tentative steps in the field came through an interest in the geographies of information, a concern with the under-representation of Asian voices on the

internet (Hicks 2016). My imagination was captured by the idea of the internet working on and through existing power relations (Hicks 2017), and I marvelled at the size and sophistication of a new ride-hailing app in Indonesia called Gojek, which already had a workforce of 200,000 drivers (Hicks 2016). Today, the workforce is ten times as large, and the firm has a market value of over US$12 billion (CNBC 2020).

Despite the many changes since *Asiascape* was first published – 'fake news' and 'social media bubbles' had not yet been invented – the journal's basic premise remains the same. It lives on the intersection between Asian contexts and digital technologies, located on the socio-technical hyphen. This makes theory development hard, not just because the concepts of 'Asia' and 'digital' both defy generalization but also because insisting on the importance of context in some ways undermines the digital. While we ask our contributors for reflections on the significance of the digital form, the unspoken contradiction at the heart of studying the 'digital' is that it is not really about the technology. In other words, we need theories about digital technologies that do not privilege digital technologies.

Although articles in *Asiascape* about online expression are still very popular, in recent years the definition of the digital within its pages has become more expansive, including articles on topics like the gig economy (Raval & Lalvani 2022), tech company ownership (Jin 2017), and digital urbanism (Swaminathan 2015). Whereas the first flush of theory development on these topics was based on European and US case studies, the kind of empirical work demonstrated in *Asiascape* from other parts of the world is now diversifying the geographies of theory from different digitally related angles. Trail-blazing articles on data extraction (Milan & Treré 2019; Segura & Waisbord 2019), data regulation (Arora 2019a), and digital or techno-colonialism (Kwet 2019; Madianou 2019) have also helped lead the way.

2   Theory in Digital Asia

The luxury of theory development is one of the ways in which academic analysis can be distinguished from the policy-oriented work of think tanks or the speedier, more atomistic articles found in the media. Developing new concepts is an important part of theory development, and a vital prior step to empirical investigation. Theory allows us to look anew at problems, helps us to understand our own prejudices and assumptions, and enables us to formulate problems differently, liberating us from only answering the types of questions that are articulated by politicians.

This article formulates the problem of digital ID differently by developing an alternative framing of the issue. Building on previous work (Hicks 2020, 2021), it applies an international political economy frame to reveal the interests, institutions, and ideologies that shape digital developments. To some extent, this approach sidesteps difficult questions about the impact of digital technologies in their environment because it emphasizes the influences that shape them. As the authors of one of the foundational texts on the relationship between technology and society put it (MacKenzie & Wajcman 1985: 2):

> Social scientists have tended to concentrate on the 'effects' of technology, on the 'impact' of technological change on society. This is a perfectly valid concern, but it leaves a prior, and perhaps more important, question unasked and therefore unanswered. What has shaped the technology that is having 'effects'? What has caused and is causing the technological changes whose 'impact' we are experiencing?

Even so, looking at the influences that shape the digital in Asia requires generalizations about both. One way to analyze such a large culturally, economically, and politically diverse set of countries is by their geopolitical position. That is what makes many Asian countries part of the 'global South', and it is one way to differentiate theory development based on non-Western case studies. Existing theory based on European and US research does not capture the post-colonial dynamics in many Asian countries that continue to emerge in today's digital landscape. Other digital issues have been shown to reflect the same post-colonial political and economic conditions in Asia as those that define the global South. For example, Arora (2019b) links today's data politics in India with the 'colonial heritage of information infrastructures, welfare and communal politics', and I made similar connections between the data governance decisions made in Indonesia and the state institutions and practices that evolved there to control information for nation-building (Hicks 2021).

In the case of digital ID, the contention elaborated here is that the post-colonial geopolitical position of many Asian countries calls for a different kind of theory about digital ID – one that recognizes their unique role in the US-China competition to dominate global technology markets.

The article begins by introducing digital ID systems. It briefly looks at some of the ways in which it is commonly written about, before bringing in three other literatures, which all contribute different concerns and methods. It concludes by borrowing elements of all the literatures reviewed to sketch out a different approach to digital ID – its 'geopolitical shaping'. The main goals of this short anniversary article are to introduce digital ID as topic that is likely

to gain more momentum in the next decade of research in digital Asia and to promote an approach to research that values theory development alongside descriptive analysis.

3   What Is Digital ID?

National digital ID systems are popping up all over the world. Uniquely identifying a person both online and offline, they are not one thing but vary widely in technical design, how they are embedded within existing institutions, and how they are used in practice. They may be based on biometric data such as fingerprints or retinal scans, which means that if a person's data are hacked, their transactions are effectively compromised for life. Some governments have made digital ID mandatory to access certain social protection schemes, whereas in other countries, they are so ubiquitous that they are nearly mandatory (PI 2021a). Most systems are currently optional in practice. Some confer citizenship, but others allow anyone who resides within their national boundaries to receive a digital ID.

As early adopters, India and Estonia are frequently referred to as having the digital ID systems with the most functionality and uses (Filer 2019; PI 2021a; Pope 2019), although by now others are catching up. Functionality goes beyond the mere existence of a state-generated digital identifier for the citizens or residents of a country but refers to the 'system' part of 'digital ID systems'. In Estonia, the system is called 'X-Road', and in India it is called the 'India Stack'. These systems can be thought of as a collection of 'shared APIs and components, open-standards and canonical datasets, as well as the services built on top of them and governance processes that keep the wider system safe and accountable' (Pope & Weiss 2021). Having one unique, universally recognized digital ID is what allows these systems to integrate siloes of data from across government about (hopefully anonymized) individuals. Under the right circumstances, this can lead to better government services for citizens and allow data-driven policy responses to social issues. The more a digital ID is required for access to government services or in the wider society (e.g. when buying a train ticket or opening a bank account), the more multi-dimensional, valuable, and potentially risky the data on individuals becomes.

Many countries now have some form of digital ID, but what distinguishes them from one another is not only the 'hard' technical issues such as whether data are stored centrally (India) or decentralized (Estonia), but also the 'soft' regulatory or social issues such as the strength of a country's privacy laws and the trustworthiness of a government or civil servants to not misuse data.

Big tech companies such as Google, Apple, and China's Tencent can also be thought of as digital ID providers, as they also seek to consolidate a wider variety of data sources about individuals by encouraging people to use their IDs to sign into unrelated online services. However, what I describe in this article are the kinds of state digital ID systems that enable, for example, the delivery of state services such as welfare benefits.

4   Common Approaches to Digital ID

The mainstream approach to analyzing digital ID systems judges how good or bad they are, on what terms, and how their negative aspects can be mitigated through regulation.

For some, digital ID systems are simply an administrative update of civilian registration systems. At one end of the spectrum, for those who saw the digital Covid-19 passports as a step on the road to a total surveillance state, digital ID is 'the linchpin of the entire global enslavement grid' involving governments, corporations, financial institutions, and globalist-connected non-governmental organizations (Corbett 2022). At the other end of the spectrum, digital ID is one of the best things that developing countries can do for their economy. The global consulting firm McKinsey promotes it as the 'key to inclusive growth' for developing countries (McKinsey Global Institute 2019), and the World Bank's ID4D programme has made US\$1.5 billion in loans available to over 45 countries to support their development (World Bank 2020). Welfare organizations show that mandating digital ID can exclude the most vulnerable from seeking state support (Khera 2019), whereas privacy activists see it as an ever-more efficient intrusion into human liberties that started with post-9/11 domestic security concerns (PI 2021a).

Most of these views have an element of truth. As identified in the UN Sustainable Development Goals, many millions of the world's poorest lack the official identity needed to exercise their legal rights or access basic services. There are plenty of good use cases, for example, digital ID has been used in Ukraine to ensure that those displaced by conflict can still access financial assistance (Losad & Large 2022). Much research details how digital ID can exclude the most vulnerable (PI 2021b), enable sensitive personal data to be used for voter profiling (Kodali 2019), and supercharge existing structural bias against minorities (Dahir 2020). Others call digital ID a costly diversion (Nyabola 2021), using funds that could be better spent on basic services.

All of those involved in either promoting or critiquing digital ID systems, whether in principle or in specific examples, recognize that the regulatory

environment of these technological systems is key. The Centre for Internet and Society provides a good example of the kind of checks that are needed to mitigate the potential privacy, surveillance, and exclusion harms of digital ID (Bhandari et al. 2020), but there are many others. All this important work is crucial for keeping up with the rapidly moving development of these systems and, in many cases, help to mitigate the negative impacts on some people's present and future lives.

However, taking advantage of the academic freedom to portray an issue differently, I offer an additional theoretical lens of digital ID that is under-represented in current analyses: its geopolitical shaping. The next section briefly reviews three literature streams that inform this framing, before discussing its implications for the kinds of questions that could be asked of digital ID, and the empirical fields that may provide data for answering those questions.

5   Three Alternative Approaches to Digital ID That Inform the 'Geopolitical Shaping' Lens

5.1   *The State-Citizen Relationship*

The diversity of the digital ID systems as well as how they are used in practice makes them difficult to research. Their ever-evolving nature, in addition to a quickly changing landscape of surrounding rules and regulations, makes them a slippery object of research. Understanding some of the more technical language involves a steep learning curve and requires the application of some imagination to squint into the future and comprehend their wider implications. For those with an interest in power, control, and social justice, the barriers to researching this topic may seem high, but its importance is clear.

Digital ID systems mediate the relationship between the state and its citizens. Scholars have identified various ways in which to think about some of the impacts of digital ID on these fundamental relationships.

Many recognize that any analysis of digital ID should start with an understanding of pre-digital civil registration processes. A classic science and technology studies textbook (Bowker & Star 2000) lays out a framework for understanding administrative classifications as expressions of underlying political and social values. Other foundational texts that seep into analyses of digital ID include Anderson's *Imagined Communities* (1983) and Scott's *Seeing Like a State* (1998), particularly the concept of legibility – the state's attempt to arrange populations so as to simplify its administrative tasks. Other authors weave in more detailed histories of domestic politics for understanding ID systems, such as Chhotray and McConnell (2018) in India and Ragas (2021) in Latin America.

Asian scholars are leading the way in thinking through the implications of digital ID for state-civic relations, and many of the most creative analyses emerge from India's experience with their digital ID.

Abraham and Rajadhyaksha (2015) describe a new kind of 'technological citizenship' in India as well as its practical constraints. Singh and Jackson (2021) map the 'distributed work and uneven consequences through which designers, bureaucrats, and users assign or claim representation' in state data systems. They offer the concepts of 'high-resolution citizens', whose rights have been expanded through Aadhaar, and 'low-resolution citizens', whose rights and entitlements have been limited. And they describe the increased distance between individuals and the state for those who have difficulty providing data about themselves.

Another theme in the literature is the role of digital ID in changing individuals from citizens to consumers. Chaudhuri and König (2017) describe the active collaboration between state and market agencies in Aadhaar as creating a state-regulated identity information infrastructure that can be used by the private sector. This leads to a citizenship regime in which 'the exclusive conception of client/consumer takes precedence over the inclusive idea of political citizens' (ibid.: 133). Because Aadhaar is available to both citizens and non-citizens alike, CHRGJ (2022: 19) notes that it effectively 'de-links the recognition of a person as a citizen and rightsholder from the system of identification'. Rather, such digital ID systems 'focus on fuelling digital transactions and transforming individuals into traceable data. They often ignore the ability of identification systems to recognize not only that an individual is unique, but that they have a legal status with associated rights' (ibid.: 8).

As for its impact on the state, digital ID is sometimes described as having increased state power. For example, Bauman and Lyon (2013) coined the term 'liquid surveillance' to refer to the diffusion of state power into the everyday lives of citizens through systematic monitoring, tracking, tracing, sorting, and checking (Cheung & Chen 2021). Yet, viewed from another perspective, digital ID has also been implicated in the wider process of 'hollowing out' state capacity because, rather than building civil service capacity, they replace it with technological solutions CHRGJ (2022).

These views of digital ID also feed into and out of the wider literature on the digital state. For example, Fourcade and Gordon (2020) argue that 'digital statecraft' leads to a transformation in political rationality where data affordances help to produce a less accountable state, drive policy strategies, and reinvent traditional public functions. In their view, it also sets up a competition with companies that want to access and capitalize on data 'minted' (created) by the state.

5.2   *The Social Shaping of Technologies*

The previous sections touch on some of the most immediate concerns about the impact of digital ID, as well as their implications for deeper changes to the state, citizens, and the relationship between the two. Rooted in particular domestic pathways of civil registration, current institutional dynamics, and technological designs, these perspectives are crucial.

However, these existing approaches may underplay the international dimension because they focus on the impact of digital ID more than on its prior social shaping. Shifting the focus to the influences on technological development would be meaningless if it did not lead to some insight into their resultant implications on society, but it nevertheless foregrounds different kinds of questions. Using the lens of social shaping theory, digital ID systems become both objects and sites of negotiation. Drawing on the rich variety of concepts developed in this field since the 1970s allows us to think more clearly about, for example, 'processes of alignment' (Molina 1997), where the views and interests of 'innovation players' become aligned, or 'processes of closure' (Pinch & Bijker 1984), where different conceptions of a technology's design, use, value, and significance are aligned. Above all, the social shaping literature emphasizes processes of negotiation while recognizing the power differential among those involved.

The social shaping lens opens up questions about those who are envisaged as the users of a technology, as well as the potential uses. In general, it reveals how different technical options are formulated, objectives set, and conceptions of need and functionality mediated in practice (Russell & Williams 2002). In the context of this article, these questions can be asked in relation to the influence felt through 'great power' geopolitical competition.

5.3   *The Geopolitics of Digital Technologies*

Anyone with an interest in digital Asia can hardly avoid the geopolitics of digital technologies. The US-China 'tech wars' narrative has been driven by China's success in 5G and artificial intelligence (AI), coupled with a more authoritarian approach to the domestic use of internet and surveillance technologies. The competition over technological dominance is seen as increasingly central to both the economic and security rivalry between the US and China (e.g. Allison et al. 2021; Wang 2020; Wong 2021), and both countries are presented as vying for technological influence in the rest of the world (e.g. Hillman 2021). Global South countries are often presented as 'battlegrounds' in this technological competition (Ciuriak 2021) and even at risk of becoming 'tech colonies' (Malinga 2020).

Think tanks are particularly active in driving this zero-sum view of conflict and extending it further to describe the exportation of Chinese-made digital

technologies as spreading a 'digital authoritarianism' in the global South. This is the idea that Chinese digital technologies sold for smart city projects are used by governments in the countries of the global South to oppress their own populations (Greene & Triolo 2020; Kurlantzick & West 2020; Polyakova & Meserole 2019). Associated claims are also being made about the influence of the Chinese state on the content of other countries' data privacy regulations (Freedom House 2018) and on digital technical standards at the international regulatory body, the International Telecommunications Union (ITU) (Meltzer 2020). Although such claims are difficult to substantiate (Hicks 2022), they draw on the very real experience of digital surveillance and control in China, particularly in Xinjiang.

Beyond the attention-grabbing headlines, empirical work is conducted by researchers with on-the-ground experience who are more likely to recognize the agency of countries in their dealings with Chinese tech firms (Gagliardone 2022; Van der Lugt 2021). These studies problematize simplistic narratives about the spread of Chinese 'digital authoritarianism' by questioning the reality of a 'grand Chinese strategy', pointing, instead, to the 'coordination challenges' (Hillman 2021) of Chinese companies in other countries that have their own priorities (Feldstein 2020). Similarly, received wisdom about a new zero-sum 'tech cold war' is not accepted as inevitable by everyone (e.g. Wu 2020). Nevertheless, the intensification of competition to dominate global technology markets is likely to influence the digital development of the global South in both predictable and unexpected ways.

6   The Geopolitical Shaping of Digital ID and Avenues for Empirical Research

The analytical angles of these three alternative approaches to understanding digital ID are here combined into a new frame – the geopolitical shaping of digital ID. It calls attention to the intersection of geopolitics with digital ID systems, while highlighting its implications for domestic state-citizen relations. Rather than focusing on assessing domestic digital ID policies and technical systems, it seeks to identify why and how other states compete to shape digital ID systems, surfacing underlying intentions. These intentions are currently scattered and hidden, but the fuzzy outline of the geopolitical shaping of digital ID is beginning to come into focus.

For example, one US think tank report usefully highlights the geopolitical argument for US attention to digital ID in countries of the global South (Runde & Bandura 2021):

> The increasing great power competition and China's growing influence, given its digital Belt and Road Initiative vision is fraught with human rights, security, and sustainability concerns. The U.S. government has an opportunity to engage and lead in the digital financial and ID infrastructure space to help countries unlock their full economic potential while simultaneously achieving their own national security priorities and creating new markets for U.S. goods and services.

This nexus between economic and security competition with China, the opening of new markets for digital service companies, and the development benefits of economic and financial inclusion opens new vistas of empirical research on digital ID. It also draws attention to the intersection of three sets of international interests: international security, international business, and international development.

6.1   *International Security Interests*

As detailed above, until now the idea that China is helping to spread 'digital authoritarianism' globally has mostly been related to countries buying surveillance technologies, particularly under the umbrella of smart city projects. As China is now reportedly rolling-out its own national digital ID system (Zheng, 2022), we can expect this domestic experience and expertise to be leveraged into new business opportunities globally.[1] Chinese companies have already been involved in providing parts of digital ID systems in Zimbabwe (Ngwenya 2021), Venezuela (Berwick 2018), and the Philippines (Macdonald 2023).

The issue of 'vendor lock-in' gives some urgency to the race to provide digital ID systems. In other words, once a country starts down the road to a digital ID system with one vendor, the use of proprietary software or other tech components could perpetuate reliance on that vendor and make it difficult to switch. Some international development agencies, such as USAID (n.d.), recommend open-source platforms, such as the one developed in India, called MOSIP (Modular Open Source Identity Platform). However, as noted by Martin (2021), although MOSIP is free, its implementation still requires financial and technical resources. It also opens the door to an ecosystem of digital services sold by private companies, particularly concerning financial technology.

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1 China's digital ID system is separate from the (commonly misunderstood) social credit system (Yu 2022).

6.2   *International Business Interests*

The Center for Strategic and International Studies (CSIS) researchers (Runde et al. 2021) note that the US 'administration should consider partnering with the US private sector, which is willing and eager to expand its role and its market in developing the infrastructure for digital finance and identity'. European biometric companies, such as Thales and Idemia, are also keen to sell their services overseas for digital ID systems and have secured contracts for digital identification projects, particularly in West Africa (PI 2020).

CHRGJ (2022: 74) notes that 'another significant segment of the private sector are service providers who will be required or encouraged to use the digital ID platform as part of their transactions with consumers. This includes most notably banks, who are subject to regulations on identity verification, but also other forms of financial products and mobile telecom providers'.

6.3   *International Development Interests*

As already mentioned, digital ID has now been absorbed into the international development arena. One of the most high-profile digital ID programmes is the World Bank's ID4D (ID for development), which integrates funding and expertise on digital ID from major global organizations, including McKinsey, the Bill & Melinda Gates Foundation, and donors such as the United Kingdom and USAID. Although so far most of the projects and advice have been directed to African countries, in 2023 some Asian countries will be added, including a planned US$250 million for a project in Indonesia as well as other advisory activities in Laos, the Philippines, and Vietnam (World Bank, n.d. a, n.d. b).

ID4D is beginning to attract some critical attention (Access Now 2020; CHRGJ 2022), but systems show that World Bank staff are well aware of the need to mitigate the potential downsides to digital ID and have halted specific projects when necessary (New Telegraph 2021).

7   Conclusion

This article argues that current approaches to understanding digital ID reports tend to present them simply as a series of technical steps to be achieved – whether technological or regulatory. Presenting an alternative, it sketches the 'geopolitical shaping' approach. It first lays out the intellectual roots that both inform and inspire it: the state-citizen literature, which shows that historical and forward-looking analysis can help think through digital ID's broader significance; the social shaping literature, which brings attention to the processes of negotiation that determine how digital ID systems develop; and the literature

on the geopolitics of digital technologies, which highlights the position of countries in the global South in international security rivalries.

Latour's (1988) famous maxim that technical decisions are 'politics pursued by other means' is surely never more relevant than with digital ID, with its central role in the domestic relationship between state and society and its potential entanglement in the great power technological competition of the twenty-first century. Because of the subtle, and not so subtle, ways that digital ID is likely to influence the forms of future states, 2023 may well prove to be a pivotal moment in the state of digital Asia when we revisit the pages of DIAS at its twentieth anniversary.

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