Article

China's Hukou Platform: Windows into the Family

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Abstract

When news media in the UK and US discuss China's surveillance networks, it is often to imply that the Chinese government is creating a "techno-authoritarian state" to track and monitor its citizens. News outlets, however, are missing a larger point. The specific problem with China's surveillance apparatus is not that it is technologically "totalizing" and "intrusive," but that it relies on a newly digitized information platform that connects surveillance subjects to information about their households and family members, allowing the simultaneous identification and monitoring of everyone in each kinship network. Referred to as the Household Register or *hukou*, this platform is the backbone of China's "surveillant assemblage" (Haggerty and Ericson 2000). Until the late 1990s when it was digitalized, hukou was an individually separate and distinct surveillance system that contained both general and detailed information about a household and its members. With digitalization, hukou became a platform that integrates different computer systems and databases. CCTV surveillance that involves facial recognition and Internet surveillance practices are connected to, and supported by, information from hukou. In the case of CCTV surveillance, cameras equipped with facial recognition features match the face of surveillance subjects with their ID and trace them back to their families. As for Internet surveillance, the connection between hukou and surveillance subjects happens via telephone number. Access to the Internet and social media platforms such as WeChat, SinaWeibo, and e-mail services requires a telephone number purchased with a government-issued ID card, which is connected to a household register and, therefore, the telephone card owner's family. Chinese law enforcement's ability to treat individual Internet users also as "collective units" represents the most distinctive feature of Chinese surveillance, an unlimited source of coercion for the Communist Party to reproduce itself as the ruling party.

Introduction

In 2017, in Guiyang city, southwestern China, BBC News correspondent John Sudworth decided to test the capacity and effectiveness of China's surveillance network to identify and track non-conforming individuals (Sudworth 2017). His experiment entailed providing local law enforcement with his photo and trying to disappear in the downtown rush of 4.3 million people. Using a network of cameras equipped with facial recognition features, it took seven minutes for the Guiyang police to identify and immobilize Mr. Sudworth. In an unusual break from the secrecy that marks public discussions about surveillance in China, one expert featured in the story noted, "We can match every face with an ID card and trace all your movements back one week in time. . . . *Match you with your relatives and the people you are in touch with*" [emphasis added] (ibid.). Focused solely on the technological-electronic component of surveillance, Sudworth's story lets the rare public statement about real-time matching of surveillance subjects with their relatives go unexplored. The piece ends on an ominous tone, showing surveillance footage of ordinary people going about their lives in the city. The footage is backed by a soundtrack of electronic beeps and a sequence of subtitled messages suggesting that the Chinese state is using its "rapidly-expanding" facial recognition surveillance network

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to, arguably, commit injustices against its citizens. Like almost every news item published by UK- and US-based media on China's surveillance networks (e.g., Doffman 2018; Lucas and Feng 2018; Mitchel and Diamond 2018), Sudworth's story overly focuses on the Chinese government's continual expansion and innovation of its surveillance technologies and overlooks the most important and distinctive feature of Chinese surveillance: the Chinese government's ability to treat individuals under surveillance as single persons and family members, seamlessly and simultaneously.

China, the most populous and third largest country in the world, has the most extensive and technologically advanced surveillance network on Earth. Chinese law enforcement already operates more than 170 million CCTV cameras (Cuthbertson 2018); many of which are fitted with artificial intelligence technology that recognizes faces and other physical attributes while connected to databases that can effectively link Internet users to their true identities (Global Times 2017). This network is likely to continue growing as the Chinese government announced in 2015 that it wants to have an all-encompassing surveillance system implemented by 2020. Dubbed "skynet," according to the Chinese government, this system entails "'global coverage, network-wide sharing, full-time availability, full controllable' public safety video surveillance construction networking applications" (National Development and Reform Commission 2015). The official goals of such a system include strengthening public security and optimizing traffic, service city management, and innovations in social governance. Although the Chinese surveillance network and its related governmental ambitions may sound "scary" and "totalizing" in size and technology, my main concern lies elsewhere: the ability of the Chinese state to use computer technologies and artificial intelligence to combine numerous, initially independent bureaucratic registration systems that sort, classify, and scrutinize humans with the real-time monitoring of human action and interaction into a single, large-scale digital platform of surveillance, or a "surveillant assemblage" (Haggerty and Ericson 2000). History has already demonstrated that the bureaucratic process involved in making up people through imposed categories can converge in formal and totalizing ways to create enormous suffering for those who are assigned disadvantageous categories and for those who do not fit the prescribed categories or are trapped in between categories (Bowker and Star 2000). Apartheid in South Africa and the Nazi regime in Germany stand as the exemplars of such processes. Imagine now if such classificatory dynamics were enhanced by the seamless digital integration of numerous surveillance systems that combine "traditional" and "new" forms of surveillance (Marx 2017). In a best-case scenario, such a situation could contribute to making the standards and classifications used to order life by the government even more invisible and, thus, more potent.

In this article, I argue that surveillance subjects in China are understood by officials as units that can be seamlessly and simultaneously approached as individuals (i.e., surveillance subjects) and/or members of a collective (i.e., their family members). This means that when law enforcement officials profile someone walking down the street or browsing the Internet, it also exposes this person's immediate and extended family to scrutiny. China is the only country in the world that has this capacity to treat the individual as a "data flow" encoded with detailed information on their entire family tree. Such a capacity results from the transformation of the Household Registration System into a "surveillant assemblage" (Haggerty and Ericson 2000): that is, a digital platform that integrates numerous originally independent "old" and "new" surveillance systems (Marx 2017). Chinese people, as well as academics, refer to the Household Registration System as the *hukou* system or simply *hukou*; *hukou* means "family" or "household" in the Chinese language. The backbone of China's surveillance apparatus, *hukou* was an individually separate and distinct household classification and registration system until approximately 1998 when it was digitized. *Hukou* contains both general and detailed information about each household in China and its members, as discussed later in this article. With digitalization, the original design of *hukou* was altered to include the ID number and photograph of every household member, creating a new pathway to effectively match surveillance subjects and their family information as well as integrate different computer systems and databases, including systems of CCTV and Internet monitoring.

Hokou Platform: China's Surveillant Assemblage

A twenty-year old scholarly piece about the trends in surveillance practices in the West inspired the research and framework supporting this article about surveillance in China. Ironically, it is the “East” (China in particular) that is most dramatically fulfilling the vision articulated in that piece. Published by Kevin Haggerty and Richard Ericson (2000), the article outlined a new trend in the world of surveillance that entailed the seamless integration of numerous surveillance systems into a comprehensive, totalizing “surveillant assemblage.” They argued that “discrete” and “heterogenous” state and extra-state surveillance systems had begun to operate together—as a surveillant assemblage in the sense of a “functional entity”—to treat the human body as a series of separate and abstract flows of information. Such information could be collected, manipulated, and recreated for an infinite number of purposes, including control, governance, security, mobility, efficiency, profit, entertainment, education, knowledge, consumption, and lifestyle activities. Haggerty and Ericson’s outline represents a succinct statement of the vision of China’s State Council (i.e., China’s executive branch) for hukou (State Council 2014) and for information systems in general (National Development and Reform Commission 2015). But, in the case of China, the process of building and integrating the component parts of the surveillant assemblage is still commanded by the state; extra-state institutions must “tag along” or put themselves out of business.

China’s State Council’s vision entails “designing” and “sharing” a database with information about the “entire population” (State Council 2014). Touching every aspect of life, such a database includes information on the following topics, according to the State Council: “labour and employment, education, income, social security, real estate, credit systems, health, family planning, taxation, marriage, ethnicity, etc.,” as well as domestic migration (ibid.). Further, the State Council’s vision is primarily oriented towards building a more effective and better-informed government, with less waste and a more efficient allocation of resources. Consequently, the hukou database, or platform, has the mandate to improve the quality of policies and services involving education, employment, retirement pensions, housing, and basic medical care (ibid.) in addition to maintaining public order (National Development and Reform Commission 2015).

The State Council’s vision for the hukou platform is represented in my research findings and compiled through interviews, observations, and documentary information. With regard specifically to documentary information, I amassed standard operating procedures published by the Ministry of Public Security on the hukou platform when I was in China doing fieldwork in 2015/2016. These documents included numerical and categorical codes used to enter and modify information into the hukou platform, and they covered the following themes: ID card application and issuance (Ministry of Public Security 2004b, c, d); citizen’s address type (Ministry of Public Security 2014b); religious affiliation (Ministry of Public Security 2004e); variables and codes used in the digitalization of the hukou register (Ministry of Public Security 2004a); variables and codes for altering items in the hukou database (Ministry of Public Security 2004f); and variables and codes to classify the population according to household status and place of origin (Ministry of Public Security 2014a). The content of such documents, especially references to other materials, reveals that the hukou platform relates to numerous other surveillance systems operated by state and extra-state institutions, as per the surveillant assemblage model (Haggerty and Ericson 2000). For instance, two of those standard operating procedures are targeted to the “security industry” (Ministry of Public Security 2014a, b), revealing that private firms are also contributing to the operation of China’s surveillance systems. Lastly, the labels and descriptions of numerical and categorical codes in these documents demonstrate how humans have become discrete flows of information—described in “serial number,” “data item label,” “data item length,” and “explanation”—that are detached from corporeal, territorial, social, political, and economic contexts on the hukou platform. And yet, these data flows are always encoded with family identification information, the initial and primary purpose of hukou.

Family: The Starting Point of China’s Surveillant Assemblage

Structured around the notion of family, the hukou surveillance systems draw their legitimacy from deep-rooted and widely supported cultural elements related to family and territory in China. These include a focus on bloodline (e.g., lineage, kinship) and spatial roots (i.e., regionalisms) as well as aspects of social hierarchy and the emotional components that involve family and territory. The capacity of the Chinese surveillant

assemblage to encode personal information flow with family identification emerged after the Communist Revolution (1949), more precisely with the national deployment of the Household Registration System (i.e., hukou) in 1958 by the Communist government. Historically, the Communist hukou was derived from ancient systems of household registration that organized the family as a unit of data and was also an agent of social conformity, serving as a disciplinary tool as well (see Dutton 1992). Unlike the ancient systems, the Communist updates to the hukou system made it more flexible because it focuses both on the family and its members, treating both entities as autonomous categories yet encoded with each other's information.

Up to the point when it was digitized in c. 1998, the Communist version of hukou consisted only of a booklet, its main material signifier, which is officially called "Household Register." The first page of this booklet identifies the household unit, including its type (i.e., rural or urban), household identification number, address, and the name of the primary adult or head of the household. Subsequent pages display the name, gender, ethnicity, birthplace, birthdate, ancestral origin, height, blood type, religious affiliation, marital status, educational attainment, occupation, workplace, military service status, and ID card number of every member attached to that household. Their relationship with the head of the household (e.g., wife, son, daughter) and spatial mobility history (i.e., address of origin and destination) are also recorded. With digitization, household members started to have their ID card number linked to their household information, and the handwritten booklets were replaced with a computer-printed (but still hard copy) version. Despite the link between hukou and ID, the household register operates over and above one's personal ID card and number, and it is regarded by the Chinese as a kind of official confirmation of the link between individuals, their kinship, lineage, and ancestral birthplace. In 2015, during my fieldwork, one interviewee concluded our long conversation about the importance of hukou saying, "Hukou tells who you really are! Where one can find you!" This interview participant, like numerous others, talked about hukou as a bureaucratic tool that makes their kinship relations and sense of belonging to a territory count from a legal perspective. As my fieldwork advanced, I learned that hukou signifies the intersection of legal-rational authority and deep-rooted traditional beliefs, or traditional authority ingrained in habituation, patriarchy, and lineage.

Using the Family to Order the Life of Individuals: Birth Permit, Household Register, ID Card, and SIM Card

In practical terms, the operating dynamics of China's hukou surveillant platform revolve around three milestones in a person's life, all related to the household register, that ensure that the Chinese surveillant infrastructure will encompass every aspect of a person's life. The first milestone is birth, including family-planning components. The second is when an individual registers for the national identity card, and the third refers to their first telephone number.

In order to list a newborn child in their household register, couples planning a pregnancy must apply for a "birth permit" (a "Fertility Services Certificate"). Having a baby without this permit violates China's family-planning policies. Without it, parents cannot include their baby in the household register, which results in the baby being considered an "irregular" person (i.e., a non-citizen or *heiren* in the Chinese language). The birth permit also legitimises and provides an identity for the child. In a country where children are viewed as symbols of happiness and prosperity, no one wants their child to be an "irregular" person.

At the age of 16, individuals must apply for a national identity card. This is linked to the household register with an identification number, fingerprints, and photograph. This system of ongoing renewal of household information, combined with identification numbers and biometrics, provides law enforcement with expansive surveillance capacity. They can use biometric cameras to zoom in on the faces of anyone walking down the street and match their face with an identity, their license plate, and phone numbers. It is noteworthy that the Chinese were not required to obtain and carry an identity card until 1984, and that the identification number began to be listed in the household register only in the late 1990s, when the Ministry of Public Security began to digitize this information into a system and format that allowed law enforcement to access, code, recode, retrieve, and link data easily. The emergence of the identity card as a required document and its link to the household register co-occurred with advances in microchip and data processing technology.

Further, changes in internal migration and urbanization obliged the Chinese state to design strategies to govern and control a fast-developing new social category: migrants.

Between the national deployment of the household register in 1958 and the Economic Reforms and Opening Up Policy of 1978, the central government in Beijing strictly limited domestic migration (Tiejun and Mark 1994). Prior to the 1980s, municipal governments had few tools to manage new residents, but as China began to adopt private market initiatives, the promise of prosperity in urban areas triggered massive internal migration. By the late 1990s, Chinese cities were packed with “peasant migrants,” that is, individuals living away from their official household registration jurisdiction and away from the watchful eyes of their families and village governments. This prompted the creation of a digital link between households and personal identification. Such a link was imperative for policing the mobile populations of urban areas. It greatly expanded the state’s ability to monitor anyone, anywhere. It also renewed the family’s capacity to guide the behaviour of its members; non-conforming members could be tracked, exposed, and face kinship sanctions, regardless of their movements or location. This continues to be crucial, as the Chinese migrant population officially reached about 250 million in 2016 (Wang 2017).

The surveillance networks feeding into the household registration system are also connected to Internet access. In 2018, China had 800 million internet users (Cao 2018); that is more people going online than the population of the entire European Union and the United States combined. Nearly one quarter of Chinese citizens rely exclusively on smartphones, compared to only five percent in the United States (Woetzel et al. 2017). However, to access the Internet and connect to social media platforms and e-mail in China, a person must provide their cellular phone number, which is linked both to their government-issued ID card and an identifying number generated at the point of sale. For instance, to log on to Starbucks’ publicly available Internet, individuals enter their telephone number on the Wi-Fi webpage. Then in a matter of seconds, they receive a numbered code via SMS (text message). While there are pre-paid telephone numbers in China that are not matched to ID numbers from the point of sale, they cannot connect people to the Internet. One can access some public Wi-Fi connections with pre-paid numbers, but these platforms cannot connect to social media, e-mail, and popular applications such as WeChat, QQ, SinaWeibo, Youku. Relying on international social media, e-mail providers, and applications is also not an option unless users have a VPN (virtual private network) installed on their devices. In fact, Internet-based firms that refuse to endorse China’s Internet surveillance system or to collaborate with law enforcement demands for information are not allowed to operate in China; this is the case with Google, Facebook, and Twitter, for example.

The Chinese propensity for using smartphones makes the surveillance of individuals and their households even more dependent on accurately matching telephone and identity numbers. This represents an important pillar of Internet surveillance in China because it also allows the recording and encoding of online consumer behaviour to connect with family information. This is significant because of the increasingly large number of people in China using the Internet to communicate, shop, and pay for various services and goods. China is the world’s largest and fastest-growing e-commerce market, accounting for about 15 percent of all retail spending (or \$630 billion of sales in 2015), a larger share than any other economy with the exception of the United Kingdom (Wei Wang, Lau, and Gong 2016). Tencent, China’s largest Internet-based technology firm, owns two of the most popular social media platforms, WeChat (*Weixin* in Chinese) and QQ, with about one billion and 598 million active users respectively (Tencent 2018). If one were to imagine rolling Facebook, Amazon, PayPal, Uber, WhatsApp, Tinder, and tens of other applications into one system, that is WeChat. It is so embedded in Chinese daily life that it can be conceived of as a digital ecosystem. The popularity of online communication and shopping represents another mechanism for surveillance legitimacy, operating in the name of socializing, networking, security, safety, and convenience. As online platforms become integrated into everyday life, this helps ensure mass compliance with surveillance, including having individuals use their regular, registered phone number and keeping their profile information updated. Information about off-line commodities and services, such as purchasing train tickets, requires that users provide an official government-issued ID number or telephone number, which is matched with the household registration profile on the hukou platform. This allows law enforcement to connect the

travellers' identity with all their family members and scrutinize every member's travelling habits, even if the ticket was bought in person at the ticket office.

A surveillant assemblage that is as totalizing and comprehensive as that of hukou comes at a technological cost; it requires powerful means to save and retrieve just-in-time and real-time information. To accomplish this, China has been investing heavily in supercomputers. According to numerous news reports (BBC News 2018), China and the US are in a head-to-head competition for the global leadership in supercomputers. As of November 2018, China had 227 systems, compared to 109 in the US (Xinhua News 2018). As of today, these computers can process up to 200 trillion (i.e., teraflops) mathematical operations per second.

Conclusion

Most researchers of contemporary Chinese society focus on the socioeconomic inequalities that are correlated to systems of household classification, especially those distinguishing between migration and access to education. In contrast, I focus my research on the governance facet, including the state's capacity to use family-related surveillance to guide behaviour and generate compliance. Because surveillance by the Chinese government ties individuals to their family members, the family becomes an additional source of coercive and non-coercive (i.e., "soft") power. In fact, the Chinese surveillant assemblage's effectiveness and resilience are related to the interdependence of the family as an operational platform that collects and creates information about its member individuals and that acts as an accepted agent of behaviour regulation. The use of the family as a regulatory agency stems from the meaning that people in China attach to the idea of the family as a supreme authority. Their lives and behaviours are usually oriented towards kinship. The Chinese also view the family as two sides of the same coin; the family is the smallest unit of a country, and the country is a collection of families. From their perspective, the individual exists primarily to support and continue the family unit. This internal logic extrapolates to the state without diminishing the importance of the individual. Further, the maintenance of this sophisticated surveillance program requires the promotion of the importance of the family as an institution. Advances in surveillance technology can accommodate, create, and transform the types of families, but the importance of the institution must be maintained at any cost. In fact, president Xi Jinping's administration has launched a series of mass media campaigns to reinforce the centrality of family to daily life, known as the "China Dream" (Xinhua News 2013). Initiated in 2013, this campaign outlines a vision for the nation's future which integrates national and personal aspirations and goals by advancing cultural values. Overall, the China Dream emphasizes "family value," "family education," and "family building" as the pathway to a happy life and a harmonious society.

China's hukou platform can guide individuals into compliance with a range of cultural and political norms by virtue of relying on both authority (coercive compliance) and a constellation of "interests" (voluntary compliance) (see Weber 1978: 941-948). Some individuals comply because they want to protect their families; others do so because they fear being subjected to sanctions and scorn from their family members. This system engages power and compliance with flexibility, suited to individual cases where it can engage coercive or voluntary power. Such a capability gives the state direct influence on intimate relationships at home behind closed doors—a window into the family. It also gives the state the option to use the family or the individual (or both) as a conduit to macro and micro government policies. No other government in the world has such an effective, cohesive, and culturally rooted surveillant assemblage at its disposal—one that can harness and foster compliance to its political, social, and economic agenda. China's hukou platform represents a remarkable source of power for the Communist Party—one that is poised to continually regenerate its domination over China's political arena.

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