

Knowing Individuals: Fingerprinting, Policing, and the Limits of Professionalization in 1920s Beijing

Modern China

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journals.sagepub.com/home/mcx**Daniel Asen¹****Abstract**

This article examines the adoption of modern fingerprinting in early twentieth-century China through a case study of the Fingerprint Society, an association affiliated with the Ministry of Interior's police academy that was active in 1920s Beijing. The members of this association viewed fingerprinting as both a technique that could be used to demonstrate China's adoption of globally accepted standards of policing and justice and a body of academic knowledge that could form the basis for a would-be profession of fingerprinting experts. While the Fingerprint Society ultimately failed to accomplish its profession-building goals, its activities nonetheless shed light on an early moment in the history of new identification practices in China as well as on dynamics that have shaped the global history of fingerprinting as an area of modern expert knowledge located ambiguously between policing and science.

Keywords

professions, policing, science, Republican period, Beijing

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On November 1, 1923, the national police academy of the Republic of China was decorated with festoons and flower arrangements for a celebratory event.¹ Instructors and students of the Advanced School for Police Officials 警官高等學校 had gathered with members of the public and journalists to commemorate the founding of the Fingerprint Society 指紋學會, a professional association affiliated with the school's program in fingerprinting. Established two years earlier, this program had already trained over 90 graduates in a modified version of the Henry system of fingerprint classification, a system for recording fingerprints used as the basis for identification registries in police agencies across the British Empire and elsewhere around the world, including in the identification office of Shanghai's International Settlement. A second class had already been enrolled, and this new group of students comprised the bulk of the Fingerprint Society's membership.

Much as in other countries during this period, officials in 1920s China were beginning to reimagine policing as an occupation requiring formal education and "scientific" methods such as those associated with crime scene investigation, police laboratories, and new methods of individual identification (Goddard, 1930; Cole, 2002: 199–200; Alder, 2007; Burney and Pemberton, 2016: 103–13; Lévy, 2008: 20; Westney, 1982: 323–24, 334–36). During the 1930s, students of Berkeley police chief August Vollmer (1876–1955) who were employed in police education and administration under the Nationalist government would play an important role in promoting this new model of professional policing in China (Wakeman, 2003: 192–204). The Advanced School for Police Officials was an earlier example of an institution that was dedicated to developing Chinese policing along these lines. Fingerprinting was introduced into the school's curriculum in 1921 as part of this effort to provide specialized training and technical knowledge to the officials who would staff China's modern police agencies.

In a series of speeches in the afternoon of the Fingerprint Society's commemorative event, the officers of this association voiced their hope that fingerprinting would see greater use in China. As they were well aware, inked impressions of hands and fingers had long been used in China as a form of signature on agreements and other documents requiring certification by individuals, a practice that continued into the Republican period.² Officials of the recently fallen Qing Empire (1644–1911) had also relied upon written descriptions of convicts' fingerprints as a means of identification, alongside tattooing and the recording of other identifying information (Waley-Cohen, 1991: 112–14). Members of the society viewed these long-standing practices as evidence that China had "discovered" the antecedents of modern fingerprinting many centuries earlier, a claim that appeared in some contemporary accounts of the history of fingerprinting that were written in European languages as well (Pan,

1922a; Wang Longzhang, 1926; Laufer, 1913). Nonetheless, they understood their own form of fingerprinting knowledge (associated with the modern neologism *zhiwen* 指紋) to be a field that had originated in Western countries and Japan and, even in the 1920s, remained lamentably underdeveloped in China (Xia, 1924b). The solution, in their view, was not simply to promote the training of police officials in fingerprinting, a goal already being pursued by the Advanced School. Rather, it was to develop fingerprinting as an area of specialized academic knowledge that, ideally, would be utilized by a professional cadre of credentialed experts with authority over the identification work carried out in Chinese police agencies.

There has been much scholarship on the rise of new legal, medical, and other professions in early twentieth-century China. Much of this work has focused on such groups' establishment of professional associations and education, assertions of authoritative knowledge and expertise, attempts to enshrine professional privileges and protections in law, and struggles to define boundaries of professional authority against competitors (Xu, 2001; Johnson, 2011; Ng, 2014; Culp, U, and Yeh, 2016; Asen, 2016). Scholars have also examined the histories of groups that played important roles in particular occupational fields yet did not (or, usually, could not) pursue the varied strategies that lawyers, physicians, medico-legal scientists, and other groups used to assert authoritative professional status in urban China's changing economy and society. Old-style midwives, commercial publishing house staff editors, and judicial officials' forensic body examiners were three examples of groups that carried out essential tasks yet did not achieve modern professional authority within the divisions of labor in which they worked (Johnson, 2011: 93–102; Culp, 2016; Asen, 2016). This is not to say that such groups lacked specialized knowledge and skill or that the importance of their work remained unrecognized. It simply means that these groups did not redefine their areas of work as exclusive jurisdictions only accessible to those with particular forms of expert knowledge, education, or credentials.

The rise and fall of the Fingerprint Society during the mid-1920s represents a case in which a new occupational group (police fingerprint experts) attempted to redefine its area of work in these ways, as a modern field of professional knowledge and expertise. Compared to many other occupational groups in early twentieth-century urban China, the members of this association seemed well equipped to accomplish these goals. The Fingerprint Society had connections at the Ministry of Interior and the Advanced School, an institution that contributed to the growth of its membership in the form of new trainees. From their position as police academy students and instructors, the members of this association were also able to create the kind of “abstract professional knowledge” that such groups typically use to define the scope of

their professional jurisdiction and legitimize their expertise (Abbott, 1988: 52–57). In the end, while the Fingerprint Society did produce and disseminate a large body of such knowledge, their goal of creating a new profession endowed with a degree of autonomy vis-à-vis other policing institutions was never fulfilled. Rather, the career paths of the association's members played out within a national policing infrastructure that did not share their goal of professionalizing identification work. Throughout the rest of the 1920s and 1930s fingerprinting remained the task of police officials who did not share the kind of professional identity and aspirations that had so motivated the members of the Fingerprint Society.

The history of this association reveals an early moment in which Chinese fingerprinting experts began to explore certain fundamental questions that have remained relevant long after the 1920s and continue to be important today. These include, for example, questions about the scientific basis and validity of fingerprint identification, the ability of fingerprint examiners to identify one individual to the exclusion of all others, and the implications of the mass application of biometric identification for state-society interactions, sovereignty, and individual rights.³ For this reason, examining how the members of this association articulated a new professional identity for themselves and defined a new field of professional knowledge can shed light not simply on the unique social, intellectual, and political dimensions of their profession-building project, but also on dynamics that have shaped the history of fingerprinting in China and globally for over a century.

Police Professionals

The introduction of modern fingerprinting practices in early twentieth-century China was deeply shaped by the country's domestic and international political situations.⁴ The early twentieth century was a period when China suffered numerous infringements of sovereignty under Western and Japanese imperialism even as it maintained its own national government, a condition that is often characterized as "semicolonial."⁵ The new Republican political system established following the collapse of the Qing faced additional challenges that included the fragmentation of domestic political power. For officials and political elites of the late Qing and early Republican period, reforming China's policing and judicial institutions was an important element in the government's response to these crises. By the early 1920s, China's criminal justice system had already undergone over a decade of reform meant to establish a new court system based on continental European and Japanese models (Xu, 2008: 25–53). In Beijing as well as other areas that had already established modern judicial and policing institutions, criminal cases were

now handled by new-style police, procurators, and judges, who investigated crime and pronounced sentences in ways that incorporated old and new judicial practices and norms (Neighbors, 2009; Ng, 2014; Asen, 2016). Nothing less than Chinese sovereignty was at stake in these developments. Since the last years of the Qing and into the early Republic, it was widely hoped that reforming China's judicial and policing practices would compel the foreign powers to give up their extraterritorial legal privileges while making Chinese governance compatible with globally recognized judicial and policing practices that signified "civilized" status (Xu, 2008: 26, 28–32; Lam, 2010).

The Advanced School grew out of a decade of initiatives to establish modern police education in Beijing (Hu, 1989 [1929]: 463–82; Han and Su, 2000: 234–43, 497–502). These began with the Japanese-run Police Academy 警務學堂, established in the aftermath of the Boxer Uprising (1899–1901) with support of the Qing, and continued into the Republican period with a series of other police schools (in reality, reorganizations of existing school facilities) that were meant to train patrol officers and police administrative staff. The Advanced School was different from these earlier schools in its higher entrance requirements, which were inspired by continental European models of police education. Enrollees had to have graduated from a school of law and politics or another police or military academy. The idea of establishing a school that could produce "specialized talent in policing" 專門警察人材 of a higher professional and academic caliber seems to have originated with Wang Yangbin 王揚濱, who was head of the Ministry of Interior's Police Administration Department at the time (Hu, 1989 [1929]: 474). Wang formulated plans for the school with Li Shengpei 李升培, another ministry official who had served as both dean and instructor in one of the earlier Beijing police academies, as well as Hu Cunzhong 胡存忠, who had taught at the earlier school as well. In September 1917 the first two classes of students began a three-year training program in policing practice and administration, with a heavy emphasis on knowledge of the law.⁶

Over the next decade, twelve classes of students—over twelve hundred individuals—completed this program (Anonymous, 1934b: 299–300). Following their graduation, almost eight hundred of these students were dispatched to police agencies across the country for practical training and employment as patrol officers and detectives, police administrative staff, chiefs of local police agencies, and instructors and administrators in police academies and training programs.⁷ It bears emphasizing that the goal of the Advanced School was to train an elite group of personnel who could administer China's emerging modern police infrastructure. The high entrance requirements and specialized nature of the school's instruction would have meant that the program's graduates had obtained a much higher level of

formal education than did most of those who served as Chinese police during this period. Patrol officers in Beijing, for example, might have received short-term training following recruitment, but their credentials to serve as police were primarily based on physical condition and knowledge of the local area, not formal education (Ding, 2013: 51–52). More comparable to Advanced School graduates would have been the officials who staffed Beijing police headquarters, who generally had graduated from a police academy or received a formal education in politics and law (49–50).

The Advanced School began to offer training in fingerprint identification in 1921 as part of an effort to supplement its three-year program with shorter courses of study in certain technical fields that were relevant to modern policing. Aside from fingerprinting, these initially included electricity (including electricity-based urban infrastructure such as streetcars, lighting, and telecommunications), architecture and civil engineering, and the use of police dogs.⁸ According to Tian Xuechun 田學純, a graduate of the school who became active in the Fingerprint Society, the impetus to establish the program in fingerprinting should be traced back to Minister of Interior Zhang Zhitan 張志潭 (who served in this position from August 1920 to May 1921) and Wang Yangbin, who was still serving as head of the Ministry of Interior's Police Administration Department. These two officials proposed including a program in fingerprinting because, according to Tian, they understood that

all countries use fingerprinting to assist in government administration and judicial affairs, thus bringing harmony to the state, and they fervently believed that the current political situation [in China] should be cleaned up, and also aspired to put the judiciary into good order. (Tian, 1924d: 論說, 2)

Ranging from one-and-a-half to two years in duration, these specialized programs would run concurrently with the school's original three-year program.

In the end, the fingerprinting program proved to be the longest lasting of the four. The three other programs only saw one class of students graduate, after which they were discontinued. The fingerprinting program, by contrast, trained three classes over the 1920s, producing over three hundred graduates (Hu, 1989 [1929]: 476–80; Chen, 1935: 88; Anonymous, 1934b: 299–300; Xia, 1935 [1922]: Liu Bangji preface, 10; Xu, 1933: 20). Much as in the case of those who graduated from the Advanced School's more general program, the graduates of the fingerprinting program obtained a level of formal education higher than that of many who were serving in Chinese police agencies. Aside from learning techniques of identification, the students also studied criminal law, detection, judicial policing 司法警察, and police laws (Hu, 1989 [1929]: 477). This training was also quite different from the modes of

fingerprinting instruction that were most common in the United States during this period. The University of Applied Science (later renamed Institute for Applied Science) in Chicago, for example, offered popular correspondence courses on fingerprinting and, in Simon Cole's (2002: 195) words, "portrayed fingerprinting as an easy avenue to professional status for young people without a college education." American fingerprint examiners tended to rely on apprenticeship-based training or simply studied on their own, a situation that resulted at times in questions about the quality of the expertise that they had acquired (Grieve, 1990; Cole, 2002: 204–5, 210–11). The Advanced School's program represented a very different vision of how to inculcate knowledge in this field and, it would seem, who the ideal candidates for such expertise were. That the writings of this program's graduates were peppered with concepts and phrases from classical Chinese texts (if not written largely in terse classical language) gives a sense of the high level of education and even erudition that they possessed.

Partway through their training, the first class of students in this program organized an association that they called the Fingerprint Society. As the students explained when putting this organization on file with the Beijing police, in taking this step they had "gathered together like-minded colleagues in order to study the academic learning associated with fingerprinting, further an understanding of the field, and promote its implementation" (Fingerprint Society, 1922b). As revealed on the pages of the association's journal and in its actions, the goals of the Fingerprint Society were even more ambitious than this and extended to promoting the creation of new national institutions and laws meant to support the development of fingerprinting in China. That the Advanced School initially supported the formation of this association is indicated by the fact that its first slate of officers and honorary presidents included two Advanced School instructors (Xia Quanyin 夏全印 and Hui Hong 惠洪, discussed below) as well as Wang Yangbin and Hu Cunzhong, whose earlier efforts had led to the establishment of the Advanced School and to the project of police professionalization that it supported (Fingerprint Society, 1922a).

Semicolonial Circuits

Despite these illustrious beginnings and lofty ambitions for the development of Chinese fingerprinting, this association ran into difficulty almost immediately. Following the general practice in the Advanced School, the fingerprinting program's graduates were dispatched to police agencies in the provinces to gain practical experience. While this dispersion of trainees accorded with the mission of the Advanced School to bring about police reform at a national

level, it had the unintended consequence that, following their graduation, the first class “scattered like the stars and the association’s affairs ceased without a trace” (Anonymous, 1924b). This initial setback in the progress of the association can be explained by the fact that its goals of building a community of fingerprinting experts and promoting their professional activities and interests were secondary to the Ministry of Interior’s own goal of pushing forward national police reform through the training and distribution of police personnel, a point that is worth keeping in mind when considering the association’s eventual fate. A second class of students was soon being trained, however, and the Fingerprint Society was reinvigorated under the leadership of instructor Xia Quanyin. This was the development that was being celebrated at the commemorative event held at the Advanced School in November 1923. Given that Xia would so decisively shape the trajectory of the Fingerprint Society and the early history of modern Chinese fingerprinting more generally, it is worth briefly examining his background, how he came to the Advanced School, and the impact that he had on this emerging professional community.

Xia Quanyin was originally from Luhe, a county near Nanjing. It is ironic given Xia’s involvement with the Advanced School that there is no indication that he himself received training at one of the police academies that had been established in Beijing or elsewhere in the early years of the Republic. Rather, Xia seems to have attended the Wusong Merchant Marine School 吳淞商船學校, graduating in 1916 at the age of about 22 *sui*.⁹ A year or so after that, Xia went to north China, where he found employment with the Beijing police and served on the staff of the Judicial Department of police headquarters, an office that handled various matters pertaining to criminal investigation and trials in the city (Tian, 1924d: 論說, 2; Xia, 1935 [1922]: 自序, 16).¹⁰ In December 1918, Xia received an assignment from Beijing police commissioner Wu Bingxiang 吳炳湘 to go to Shanghai along with Hui Hong, another member of the Judicial Department’s staff, to study fingerprinting in the Identification Office of the Shanghai Municipal Police (SMP), the British-controlled police organization that administered public order in the International Settlement (Xia, 1935 [1922]: 自序, 16). It is likely that Xia and Hui were chosen for the assignment in part because of their knowledge of English.

Xia and Hui were sent to Shanghai as part of a broader exchange of personnel that was initiated by the SMP. Shanghai was one of the first five Chinese treaty ports that were established under the Treaty of Nanjing following the Opium War (1839–1842). Under the provisions of a series of subsequent agreements, large zones of the city were placed under the jurisdiction of the International Settlement and French Concession, which maintained the authority to police these territories. At this time, the SMP was seeking Chinese police officers to serve as sub-inspectors who could supervise the

large number of Chinese personnel who worked in the SMP's lower ranks (Anonymous, 1919a; Anonymous, 1919b; Shanghai Municipal Council, 1920: 47a; Bourne, 1929: 29–30, 33–34). Putting a certain number of Chinese in these mid-level positions was part of an evolving “synarchy of practice,” in Robert Bickers’ (2000: 177) words, that defined the working relationship between the foreign leadership of the SMP and the large number of Chinese on whom it relied, but also tended to view as untrustworthy and vulnerable to anti-foreign and communist “agitation.”¹¹ Xia and Hui went to Shanghai along with six “top-class graduates in policing” 警務優等畢業生—possibly individuals who had graduated from one of the police academies preceding the Advanced School—who were sent to fill these positions (Anonymous, 1919a). They received short-term training from the SMP as a peripheral part of this arrangement, as did two officers from the fire brigade of the Beijing police. Upon their return to Beijing, Xia and Hui were appointed as instructors in the Advanced School.

Xia Quanyin’s influence on this program was significant. Students learned the fingerprint classification system that he himself had developed on the basis of the Henry system created by British colonial official Edward R. Henry (1850–1931) and his assistants Azizul Haque and Hem Chandra Bose.¹² The main innovation of Henry and his assistants was to create a system for describing the total profile of a person’s ten fingerprints that could form the basis for an indexed registry, thus making it possible to efficiently organize large collections of fingerprint cards. Using this system or one of the other fingerprint indexing systems that were being developed at the time, police officials could search their card collections for the ten-print profile associated with a person whose identity was unknown or in question. Officials could then confirm the person’s identity through further inspection of the information contained on the matching cards that were retrieved from the file. Using modern fingerprint identification to its fullest meant maintaining large collections of such records.

This regime of identification was different from the one that had been used by officials under the Qing to document identifying information about convicts. Under this earlier system, officials had been required to record convicts’ *dou* 斗 and *ji* 箕, a dual classification of fingerprint patterns, popular within Chinese society more broadly, that distinguished between circular or spiral-shaped patterns and those that had an asymmetrical or crooked form (these categories were subsequently translated into the “whorls” and “loops” of modern fingerprint classification) (Waley-Cohen, 1991: 112–14; Xia, 1926d; Xia, 1935 [1922]: 210). According to Joanna Waley-Cohen, officials could identify an escaped convict by comparing the sequence of *dou* and *ji* appearing on the ten fingers with the information that had been recorded in

advance, as well as by matching other information about physical appearance, including tattoos. Under this system, fingerprints served as markers of identity to the extent that the written description of these patterns could be compared with the fingers of a living person. This method did not utilize a searchable registry of fingerprint cards, nor did it involve procedures for documenting minute ridge characteristics of the kind that form the basis for modern fingerprint identification practices.

Following its initial use in Bengal in the mid-1890s and then throughout India, the system devised by Henry and his assistants was implemented in England as well as other parts of the British Empire by the first decades of the twentieth century (Breckenridge, 2014: 77–82, 88). The Henry system and its variants were also used in the United States and other countries and colonies throughout the world (Cole, 2002: 224–25). This was the system that was used by the SMP (Anonymous, 1915: 397). In adopting this system, Xia and other members of the Fingerprint Society thus became prominent Chinese proponents of a practice that originated in the British Empire and was brought to China by the foreign-administered police force of Shanghai's International Settlement. In their desire to assert national sovereignty by developing Chinese fingerprinting, the members of this association drew on the very same techniques that had been used to enforce the legal and political privileges of foreign powers in China, a pattern that is apparent in the histories of policing and public hygiene as well (Lam, 2010; Wakeman, 1995: 60–77; Rogaski, 2004).

Xia Quanyin's role in introducing fingerprint identification to China during this period went beyond his instruction at the Advanced School. Xia also assisted the Beijing police and courts by collecting and examining fingerprints in cases involving homicide and theft, examining questioned documents in civil cases, and using fingerprints to verify the identities of suspects. In criminal cases, one of the most commonly used procedures was to compare finger impressions that had been discovered at a crime scene with the fingerprints of everyone who worked in that household or business, a process that often exonerated employees. For example, when bundles of wire were stolen from an electric lighting company located in Beijing's Legation Quarter in late August 1924, the Legation Quarter's police sought Xia's assistance (Xia, 1926a). Fingerprints discovered at the scene were compared with those of the company's workers, none of which were a match. Given that, according to Xia's subsequent account of the case, the "foreign manager" 洋經理 had suspected from the outset that the culprit was an employee, the use of fingerprints had made it possible for "these innocent 37 workers to cast off suspicion," thus averting a possible injustice. Xia's work in such cases was covered in the newspapers, including Beijing's *Morning Post* 晨報 and *World*

Daily 世界日報 and Shanghai's *Shenbao* 申報, thus raising his public profile as well as that of fingerprinting more generally (Xia, 1924a; Anonymous, 1925; Anonymous, 1927; Huang, 1929).¹³

It was against this backdrop that Xia became president of the Fingerprint Society as it was being reconstituted with the enrollment of a second class of fingerprint trainees at the Advanced School. In retrospect, it is difficult to distinguish Xia's own activities and accomplishments from those of the association. If it were not for Xia's casework, his connections with police officials in the city and in the Ministry of Interior, and his skillful use of varied media to promote himself and his services, it is likely that the Fingerprint Society would have been much shorter-lived and much less publicly visible than it was.

Xia's influence on the activities of this association is especially apparent in the emphasis he placed on the production of knowledge—formal, academic in flavor, and authoritative—about fingerprinting. Xia's own *Academic Learning of Fingerprinting* 指紋學術 (1935 [1922]), a primer that explained his classification system, was used in the Advanced School's instruction and very clearly set discursive parameters for the articles appearing in the society's journal, which was called *Zhiwen zazhi* 指紋雜誌 (or *The Finger-Print Magazine* in its accompanying English title). This journal also included accounts of cases handled by Xia and others under a section titled simply *shiyan* 實驗, a word that could mean “practical experience” or the “practical verification” of a particular claim or matter (today it simply means “experiment”).¹⁴ The point of using this word, which also appeared in the title of a published collection of Xia's (1926e) own cases, was to show that this collective experience, embodied in cases, had already demonstrated the value of fingerprinting for China.

Fingerprinting as Science

One of the most common claims in the writings of the Fingerprint Society was that fingerprinting should be viewed as a field of academic knowledge. Described variously as involving “academic learning” 學術 or as being a “specialized subject” 專門學科 or a “science” 科學, fingerprinting was also viewed as a field informed by “principles” 原理 and “theory” 學理 that were worthy of study and elaboration, much like other fields of formal academic learning (Anonymous, 1924a: 附錄, 1; Anonymous, 1924b; Tian, 1924a: 附錄, 8; Chen, 1926: 59, 64). Such characterizations would have been familiar to fingerprint examiners (and handwriting identification experts) in the United States, who also portrayed their areas of expertise as being “scientific,” thus implying that their techniques were based to some extent on academically validated knowledge (Cole, 2002: 198–99, 215–16; Mnookin, 2001: 1788–1801). The cover of

the American professional journal *Finger Print Magazine*, for example, carried the subtitle “A monthly journal devoted to the science of finger print identification,” a characterization of the field’s authoritative epistemic status that appeared often in its pages.¹⁵

We find a deeper elaboration of fingerprinting as a “scientific” field in a piece by Advanced School graduate Pan Tianhui 潘天慧 (1922) that was published in the first issue of the society’s journal. The article, titled “The Reason That Fingerprints Are All Different,” grew out of Pan’s curiosity about why a person’s fingerprints are commonly assumed to be unique to that individual, as well as about the relevant “physiological principles” 生理上之原理 that could explain this phenomenon. The idea that “everyone’s [fingerprints] are different” 人各不同, which appeared in this piece and in the other literature of the Fingerprint Society, was the Chinese-language equivalent of an assumption (or “mysterious truism,” in Simon Cole’s [2002: 199] characterization) that has played an important role in legitimizing fingerprint identification in the United States and elsewhere for over a century.

Pan’s article provided two answers to the question of why fingerprint patterning is unique to the individual. The first was simply that “of all the things in the natural world, there are none that are completely identical to each other” (Pan, 1922b: 研究, 1). Pan illustrated this point by an anecdote about an unnamed Western naturalist who instructed his son for three years by having him examine leaves taken from plants of the same species over and over again. The son’s conclusion that in nature “everything is different from one another” 各各不同—that is, that no two natural objects are identical—was the intended lesson. Pan then applied this principle to fingerprints, noting that

the human body is also one of the things found in the natural world. Given that all things in the natural world are different from one another, the human body’s physiological makeup 人體生理之組織 will also be this way. The fingerprints that are part of the human body’s physiological makeup are different even more so.

By “physiological makeup,” Pan seems to have meant the anatomical structure of the body in addition to its physiology, topics that were discussed elsewhere in the association’s writings (Chen, 1926).¹⁶ Pan’s use of “physiology” in this way was not idiosyncratic. Others in the society also invoked “physiology” as the scientific discipline with greatest bearing on fingerprinting. This way of describing the scientific status of the knowledge underlying fingerprint identification reflected the particular way members of the association narrated the history of fingerprinting as a field. They consistently traced this history back through a succession of figures who are familiar to the history of fingerprinting in the West, including Edward R. Henry, Francis Galton

(1822–1911), William Herschel (1833–1917), Henry Faulds (1843–1930), and, at its origins, Johannes Evangelista Purkinje (1787–1869) (Tian, 1924d: 論說, 2; Li, 1924b: 研究, 4; Wang Jiangsheng, 1926).

The Czech Purkinje was a pioneer of experimental anatomy and physiology (with broad scientific interests beyond these fields) who described and classified the patterning of ridged skin on the fingers as part of his research on the anatomical organization and physiology of the skin (Studnička, 1936; Cummins and Kennedy, 1940). By invoking Purkinje and his “physiological” approach to explain both the historical origins of fingerprinting and its disciplinary status within the sciences, members of the society were implicitly arguing for the scientific status of their own professional knowledge. Works on fingerprinting in Europe and the United States also afforded Purkinje an important status in the history of fingerprint identification, even though his original nine-pattern classification did not, in any real sense, anticipate the developments that made fingerprinting a practicable tool of identification (Cummins and Kennedy, 1940: 344n10; Cole, 2002: 77–79).

Returning to Pan Tianhui’s article, we thus find tendencies that are similar to those of American proponents of fingerprinting who, as Cole (2002: 213–14) notes, tended to invoke “a vaguely articulated natural law” that supposedly guaranteed the principle of uniqueness on which fingerprint identification rested. Members of the society explained and justified this principle in other ways as well, and these resonated with claims about the authority of fingerprinting that were being made elsewhere in the world. They commonly noted that members of the same family or race 種族—that is, persons who were ostensibly genetically related—did not have similar fingerprints, and also that two identical fingerprints had never been discovered throughout the decades in which the technique had been used (Chen, 1926: 62; Li, 1924b: 研究, 4; Liu, 1926b: 33). In the third issue of the society’s journal, a graduate of the fingerprinting program’s third class named Liu Rihua 劉日華 (1926c: 18) noted that in the 103 years since the birth of modern understandings of fingerprints—that is, since the completion of Purkinje’s thesis that touched on this topic—“no two people with identical fingerprints have been found throughout the entire world.”

These ways of understanding the supposed individual uniqueness of fingerprint patterning had parallels in the literature on fingerprinting in the United States and elsewhere. Pan’s second explanation, by contrast, was more specific to the Chinese context. This explanation, which Pan characterized as having been deduced within the intellectual milieu of philosophy 哲學, rested on an excavation of the meaning of *zhiwen*, the modern Chinese word for “fingerprint,” which is composed of the characters *zhi* 指 (finger) and *wen* 紋 (Pan, 1922b). The latter, Pan explained, has the meaning of *wenli* 紋理, striated or

lined patterning of the kind that appears on jade and other natural objects as well as on fingerprints. Pan's argument about the individuality of fingerprints hinged, however, on the meaning of *li* 理, which etymologically informed this specific notion of patterning. While *li* has various meanings, such as the polishing of jade, its deeper philosophical meaning was Pan's main concern. In expounding upon this meaning, Pan cited the definition given by the eighteenth-century scholar of Han Learning Dai Zhen 戴震 (1724–1777): “*Li* is a name given to the examination of the minutest details with which to make necessary distinctions. This is why it is called the principle of differentiation 分理. In the case of the substance of things, we call it ‘fiber in muscle’ 肌理, ‘fiber in flesh’ 腠理, and ‘pattern and order’ 文理.”¹⁷

From the article's subsequent discussion, it is clear that Pan was emphasizing one meaning of *li* in particular: that each and every thing has a particular “principle” that makes it what it is.¹⁸ By invoking Dai Zhen's definition of this concept, Pan was specifying that such principles were inseparable from (and observable in) the concrete things that exist in the world, one of the points that Dai was making in his critique of the received (post-Song) Neo-Confucian metaphysics. Pan elaborated on this concept further by mentioning the idea, supposedly drawn from the modern discipline of physics 物理學, that all material things are distinguished at the most fundamental level by their different “arrangements of molecules” 分子排列, itself a manifestation of their differing principles (*li*).¹⁹ For Pan, this roundabout line of reasoning justified the claim that fingerprints, like all things in the world, were unique at a fundamental (perhaps even metaphysical) level.

Much as Joan Judge (2015: 20) has noted for the early Republican period *Funü shibao* 婦女時報 (Women's Eastern Times), a publication that constructed “women's experience” as a new object of intellectual and commercial interest, the society's journal was also characterized by a “diverse mix of linguistic registers,” juxtaposing pieces written in terse classical language with essays and other pieces written in the vernacular. Much as in Pan Tianhui's invocation of the weighty concept *li* (principle), other authors also demonstrated their knowledge of the classical written language in various ways. In the most rudimentary examples, some authors used classical phrases to underscore the particular points that they were making. Xia Quanyin, for example, used the phrase “People's minds are different, just like their faces,” from the *Zuo Commentary on the Spring and Autumn Annals*, as a foil in his criticism of the idea that one could identify individuals on the basis of outward appearance (fingerprints were, of course, the only reliable way of doing this) (Xia, 1935 [1922]: 1; Meng, 1926: 16).²⁰ Some presented passages drawn from classical texts as evidence demonstrating China's long history of interest in fingerprint and palm patterning (Pan, 1922a; Wang Longzhang,

1926). All of the writings in the journal were, of course, filled with terms drawn from the new scientific, legal, and political vocabularies that had been recently introduced into Chinese, largely through Japanese mediation.

That these discussions drew on varied sources of intellectual and cultural authority reflected the complex intellectual atmosphere of the early Republican period, a moment in which the texts, concepts, and ways of knowing associated with China's early modern elite intellectual culture were being challenged but also engaged by those who promoted new academic disciplines and new ways of legitimizing knowledge, including modern science (Judge, 2015; Hammerstrom, 2015). It is important to remember that one did not need to have an understanding of the anatomy and physiology of the fingers' ridged skin or of why fingerprints are supposedly unique to carry out identifications in legal cases or in other applications of the technique.²¹ Rather, producing formal knowledge on these topics was itself a way for members of the Fingerprint Society to frame their occupational expertise in relation to prevailing cultural concerns and values, a strategy that is generally followed by modern professions (Abbott, 1988: 184–95). In this instance, this would-be profession legitimized its authority by appealing to new scientific disciplines such as physiology and physics, language and concepts drawn from China's older early modern intellectual culture, and, as we will see now, discussion of the pressing political questions for which the widespread implementation of fingerprinting might provide a solution.

Fingerprinting Applied

Much as in late nineteenth-century Egypt and Siam, elites in early twentieth-century China viewed the implementation of modern forensic practices such as fingerprinting as a way of strengthening the country's state apparatus and asserting sovereignty (Fahmy, 1999; Pearson, 2018). An early example of this thinking appeared in an article by instructor Hui Hong (1922) in the first issue of the society's journal.²² Hui suggested that establishing fingerprinting in China would improve the country's judicial capabilities in various ways: officials could use fingerprints to identify and punish recidivists, deter criminal acts (given criminals' awareness of the presumed efficacy of fingerprinting), investigate crime more efficiently, and generally improve the quality of the evidence used in Chinese legal proceedings. If the Chinese judiciary could be improved in these ways, it would strengthen the argument that foreign countries should give up their extraterritorial judicial privileges. Thus, Hui (1922: 社說, 1) suggested, establishing fingerprint identification would make it possible to bring an end to an area of foreign involvement that was preventing China from enjoying "the right to independently manage all of the

persons and things in its territory,” a basic requirement of sovereignty 主權 as this concept was commonly understood.

The administration of justice was not the only area of Chinese governance that would be improved with the use of fingerprinting. We find discussion of the broad uses of fingerprinting beyond criminal investigation and the judiciary in draft regulations, discussed further below, that members of the Fingerprint Society submitted to the Beijing government on several occasions. With these proposals, they hoped to persuade officials to regulate the practice of fingerprinting at the national level, thereby promoting the use of this technique and creating a demand for the knowledge and expertise that they were gaining at the Advanced School. Such regulations contained provisions for standardizing both the fingerprint classification systems used throughout the country and the ways such expertise would be integrated into Chinese police agencies. They also specified the various applications for which these identification practices might be used, and it is here that we can gain an understanding of how members of this association envisioned the ideal or fullest use of fingerprinting. Much like proponents of fingerprinting in the United States and elsewhere during this period, members of the Fingerprint Society believed that fingerprints could become “a civilian identifier used in all aspects of daily life and social interaction,” a project that, as Cole (2002: 197–98) suggests for the United States, “reflected progressivist, technocratic efforts to bring about a more orderly, and hence more efficient, more just, and more prosperous, society.”

One set of such regulations was drafted by Tian Xuechun (1924c), whom we have already encountered as an active member of the Fingerprint Society and a chronicler of its history. According to Tian’s draft regulations, fingerprinting could be used broadly and in ways that far surpassed the scope of existing Chinese uses of hand and finger impressions. Some of these applications were administrative in nature. These included the use of fingerprints to license the proprietors of certain businesses, to register births and collect census information, and to identify those who violate police regulations or other administrative rules. The judicial applications of fingerprinting would have been more familiar than these, and included using fingerprints in criminal investigation, as an incontrovertible signature on police interrogation statements or court depositions, and, of course, as a way of verifying the identities of detainees or prisoners. The regulations identified other uses beyond these as well: fingerprints could be used on contracts or other documents as a way of preventing counterfeiting or other forms of fraud or to verify the identities of those who were eligible to vote, who were taking qualifying examinations, or who had been recruited into government or military service (附錄, 9–11).

Some of these applications were already being used in China during the 1920s. Fingerprinting saw increasing use in prisons in Beijing and elsewhere during this period, even though this work was handled by the judiciary and not by police officials (Dikötter, 2002: 84, 212–13; Wang, 1917 [1915]: 61–62; Xia, 1924c). Finger impressions were also given on contracts as well as other kinds of agreements and documents, an informal practice within Chinese society (including among literate people, not simply those who were unable to sign their own names) that long preceded the introduction of modern fingerprinting. This customary practice yielded unexpected benefits when Xia Quanyin or others were asked to evaluate the authenticity of such documents. They could easily compare the finger impressions given on the questioned document with samples taken from the signatories (Xia, 1926b; Xia, 1926c). Other uses of fingerprinting were relatively uncommon during the 1920s, certainly less common than they would become during the 1930s and 1940s. In one application that was closer to the kinds of expansive uses of the technique envisioned by members of the Fingerprint Society, fingerprints were used to verify the identities of those taking the Advanced School's entrance examination. In an operation overseen by Xia and his students, the fingerprints of more than 350 enrollees were taken over successive days of testing in May 1926. This yielded four cases in which a test candidate had tried to perpetrate fraud by having another person complete the test in his place.²³

One finds in the writings of the Fingerprint Society a definite sense that broadening the application of fingerprinting in China would transform state-society relations in a positive manner—specifically, in the direction of a functioning albeit vaguely defined constitutional order. There was a convergence between these discussions of fingerprinting and the new political vocabulary of constitutionalism, citizenship, and statism (i.e., the idea that the state itself, not the ruler or otherwise, was a distinct political entity and fundamental source of sovereignty) that had been developing in Chinese intellectual circles since the late Qing (Zarrow, 2012). In another piece that appeared in the society's journal, for example, Tian (1924b) further elaborated on the various categories of “rights” 權利 that would be safeguarded if fingerprinting was carried out broadly.²⁴ By using fingerprints to verify the identities of registered voters as well as those seeking office in elections, Tian noted, one could safeguard the “right to participate in government” 參政權 by ensuring the integrity of elections. “Property rights” 財產權 would likewise be protected with the extensive use of fingerprints on contracts given that this would prevent fraudulent claims made on the basis of counterfeit documents.

The Fingerprint Society (and, for that matter, the Advanced School) did not follow a single orientation or approach toward questions such as how the state should be organized or what its ideological foundations should be.

Police training at the school during the early and mid-1920s was less ideologically regimented than it would become during the Nanjing decade, after the Nationalist government began to integrate Nationalist Party ideology into the school ethos and curriculum (Han and Su, 2000: 732–42). Generally, one might characterize the political position of the Fingerprint Society as advocating the creation of a kind of “biometric state,” to borrow Keith Breckenridge’s term, in the sense that fingerprinting would be fundamental to the structure and functioning of the state, its interactions with society, and the sources of its authority, all of which would be oriented toward republican constitutionalism.²⁵ Of course, these discussions about the political implications of fingerprinting were theoretical, and largely concerned with the kinds of relationships that *could* exist between the state and a society comprised of biometrically identifiable individuals.²⁶ These proposals also rested upon a highly idealized understanding of the benefits of fingerprinting for the Chinese state, one that took into account neither the challenges and costs that would actually be involved in placing Chinese governance on a biometric basis nor, crucially, the extent to which the diminished national government of the mid-1920s might be willing to support such ambitious plans.

The Limits of Professional Autonomy

Thus far we have been examining how the Fingerprint Society used its writings to explore the “scientific” foundations of fingerprinting and the potential for new identification practices to strengthen the Chinese state. The Fingerprint Society also urged the national government to establish fingerprinting as a legally and institutionally distinct profession within China’s emerging infrastructure of modern police agencies. These efforts, which focused on the promulgation of a national law that would regulate the practice of fingerprinting, mirrored those of other professional groups such as lawyers and physicians, who also attempted to secure official endorsement for their particular areas of expertise as well as regulations to protect their professional interests. In a study of the interactions between urban professional associations and the Chinese state during this period, Xiaoqun Xu (2001: 15–16) has suggested that such relationships were generally characterized by “interdependence.” Professionals in law, medicine, and other fields contributed essential expertise to the running of modern state institutions (and the handling of other societal and economic roles); at the same time, they relied on the state to create and enforce laws that would recognize their expert status, expand the demand for their expertise, and suppress purportedly unqualified competitors. How willing the national government was to support the Fingerprint Society’s agenda of professionalization thus emerges

as an important question for understanding the possibilities that actually existed for the members of this association to establish a more exclusive jurisdiction for themselves over police identification work.

On several occasions, members of the society tried to persuade the Ministry of Interior to issue such regulations. Early on, according to Tian Xuechun's (1924d: 論說, 2) account, Wang Yangbin and Hu Cunzhong drafted a set of such regulations, but "unexpectedly the administration was overthrown, the cabinet resigned, and Minister Zhang Zhitan and Department Head Wang subsequently left the scene." The officials who succeeded them, Tian continued, "just stuck to established practices and were not willing to follow new ways, and so the implementation of fingerprinting was completely forgotten about."²⁷ At some point during their training, the first class of students also proposed a set of draft regulations to the Ministry of Interior (Fingerprint specialization student representatives, 1922). These regulations included provisions for establishing a Central Fingerprint Bureau that would "oversee the fingerprinting-related matters of the entire country" as well as departments, attached to provincial and county-level police agencies, that would handle local identification work. These offices would be staffed by graduates of the Advanced School's program, thus implying that there would be a degree of standardized training at the national level as well as a sustained demand for the graduates' expertise in local police offices. These regulations were not adopted, however, nor were those included in subsequent appeals to the Ministry of Interior and Ministry of Justice (Tian, 1924a; Liu, 1926a). The government also declined to endorse the society's proposal for the creation of a license for fingerprint examiners, a development that ostensibly would have elevated their status in relation to other police officials who lacked this professional credential (Liu, 1926b).

The mid-1920s were, of course, a time when the national government faced paralyzing factionalism and bureaucratic dysfunction, repeated changes in cabinet-level leadership, financial insolvency, and inconsistent relations with regions beyond Beijing (Houn, 1957; Nathan, 1976). The new constitutional political system that was partially implemented under the Qing (and that subsequently formed the basis for the Republic of China) had already been rendered ineffective with the regional militarists' seizure of power and the subordination of the formal political process to their interests and conflicts. This disintegration of the post-Qing political order occurred at precisely the moment when members of the Fingerprint Society were developing their greatest professional ambitions. The Beijing government was clearly invested in supporting national police reform by training class after class of Advanced School students and then dispatching them to police agencies in every region of China, including the Northeast (Manchuria), the lower Yangzi

region, southern and central China, and even as far west as Xinjiang (Anonymous, 1933).²⁸ Yet, even as it continued to support the training of students at this school, including three classes of students in the fingerprinting program, the government declined to endorse the society's vision of an institutionally distinct profession staffed with credentialed experts and girded by nationally promulgated regulations.

Given these setbacks, one finds in the society's writings a sense of disappointment and even disillusionment. In a piece discussing the various ways fingerprint identification might benefit state and society, for example, Xu Dingming 許鼎銘 (1926: 14) noted that despite the apparent usefulness of this technique, "those who understand this in China are few and far between, which is truly lamentable! Even though the importance of fingerprint identification for the government is well known, no one has been able to promulgate fingerprinting regulations or put them into effect. Is this not to the detriment of the judiciary?"

A similar sentiment appears in a piece by Hou Zhongyang 侯仲陽 (1926) arguing, like many other pieces in the journal, that fingerprinting was superior to other identification techniques such as photography (which only captured a person's appearance at one moment) or the comparison of samples of handwriting (which, in Hou's estimation, was hardly useful in China given the population's low level of literacy). Hou's verdict when considering the question of how fingerprinting had progressed in China, however, was that "one cannot help but to sigh deeply!" Hou continued,

Not only do the authorities not promote fingerprinting, but they are also not willing to fully make use of those fingerprinting personnel who have already benefited from their studies. Those who practice this technique have become disheartened and can do nothing to remedy the situation. Thus I cannot help but cry out in grief for the future prospects of fingerprinting! (28)

Although a number of such personnel had already been trained at the Advanced School, an achievement that Hou credited to the skill and dedication of Xia Quanyin, this did not guarantee that their expertise would be valued. Thus, as Hou admitted,

My own way of thinking about it is that the fact that we pursue our studies is more important than the question of whether the authorities actually make use of fingerprinting. If we can always strive to do better in our studies and deeply pursue our learning, then even if it is not used, there will still be a worthy result. (28)

Hou's disappointment and that of others came from the perception that national government authorities were not supporting the institutional development of fingerprinting, an issue that was inseparable from their own professional

ambitions. It did not stem from a lack of employment opportunities for graduates of the Advanced School. Some of the graduates did indeed find employment in China's small number of police identification offices. Graduates Xu Hui 徐慧 and Meng Zhiqi 孟誌奇, for example, became advocates of Xia Quanyin's fingerprint classification system during the 1930s amid debates about which system was most suitable for China. Both were employed in the fingerprinting unit of the Capital Police Bureau in Nanjing, where Xia Quanyin became chief of detectives (Anonymous, 1934a: 112, 115). At the same time, many of those who went through this program became detectives, police administrative personnel, or instructors in police training programs, serving in positions that were ostensibly not dedicated to fingerprint identification. While this outcome hardly fulfilled the vision of specialized fingerprint offices that had been set out by the society, it was nonetheless congruent with the goal of the Advanced School to ensure that Chinese police officials possessed specialized training and formal knowledge.

In mid-1928, the Advanced School came under the authority of the Nationalist government following the Northern Expedition, an event that initiated a decade of party-led state-building before the outbreak of the Second Sino-Japanese War. At this point, the fingerprinting program established in 1921 was discontinued and the Fingerprint Society precipitously disappeared from the scene.²⁹ The Advanced School would remain in Beijing (renamed Beiping with the establishment of the Nationalist government's capital in Nanjing) until early 1934, when it was finally relocated to Nanjing (Han and Su, 2000: 733). Those who were involved with this school continued to promote the development of academic knowledge about policing as well as the specialized training of police personnel. A new organization, the Advanced School Schoolmates' Association 警高同學會, was soon created to advance these goals. Much like the Fingerprint Society, this association published a journal, *Modern Police* 現代警察, which was heralded as the "only publication devoted to research on the academic learning of policing" 研究警察學術唯一之刊物 (Xiandai jingcha [1933] 1, 1: front matter). The way fingerprinting was covered in this journal, however, suggests an understanding of this field's disciplinary status that was quite different from that which the society had advocated. Rather than being the subject of its own journal (and, in the society's greatest ambitions, its own professional institutions) fingerprinting appeared in *Modern Police* as one subfield among many of the general knowledge possessed by police professionals.

Conclusion

The impact and legacy of the Fingerprint Society were mixed. While most of the proposals of its members were not adopted, they did anticipate subsequent

developments in the history of Chinese fingerprinting in striking ways. In retrospect, this association clearly represents a moment in which long-term tendencies toward expansion, formalization, and standardization in Chinese fingerprinting saw their earliest formulations. Nationalist authorities' push to "unify" 統一 the fingerprint classification systems in use in China during the 1930s, for example, resembled the earlier aspirations of the Fingerprint Society to bring about a nationally standardized fingerprinting system.³⁰ Comparable efforts continued following the Communist revolution in 1949 as the central government of the People's Republic of China began to regulate and standardize the ten-print classification systems used throughout the country. The national system that emerged out of this process, ironically enough, incorporated elements from the Henry system, an old tool of colonial administration that was, once again, put into the service of a very different set of political interests (Liu, 1984: 12–13, 495–501). The cumulative effect of these efforts, which unfolded over many decades and under varied political conditions, has been to put into place training, research, and investigative capabilities in fingerprinting that support a now unquestionably sovereign China's policing and judicial apparatuses. There is much about this outcome that would have been recognizable and perhaps even desirable to the members of the Fingerprint Society.

Beyond its significance for the history of Chinese fingerprinting, the case of the Fingerprint Society is useful for understanding how concepts of fingerprinting knowledge and expertise have been negotiated at the intersection of policing and science, a dynamic that has run throughout its history (Cole, 2002; García Ferrari and Galeano, 2016; Joseph, 2001). Framing fingerprinting as a science was one of the strategies used by the members of the Fingerprint Society to demarcate a distinct area of professional knowledge and expertise within policing. While the underlying motives have undoubtedly differed across time and place, similar rhetorical moves have been made throughout the modern history of fingerprinting. Writing in China in the early 1980s, for example, fingerprinting expert Liu Shaocong 劉少聰 defined this field as an "applied science" 應用科學 with connections to dermatoglyphics 皮膚學, biochemistry, organic chemistry, advanced mathematics, and computing, a disciplinary landscape much more complicated than the Fingerprint Society's mere invocation of "physiology" (Liu, 1984: 1).

Moreover, in the United States and elsewhere recent decades have seen calls for latent fingerprint identification to become more research-based as well as more autonomous in relation to law enforcement (Lynch et al., 2008: 293–334; National Research Council, 2009: 136–45). That this critical discourse has questioned the epistemic foundations of fingerprinting—that is,

the quality of the knowledge on which fingerprinting is based—makes it different from the unquestionably positive characterizations of fingerprinting as a “science” that have been common throughout its modern history, including in 1920s China. At the same time, the current expectation that fingerprinting should be even more “scientific,” however that category is defined, suggests just how compelling scientific disciplines and academically validated knowledge have been, and continue to be, for conceptualizing expertise in this field.

Statements such as those of the Fingerprint Society or Liu Shaocong about the scientific status of fingerprinting knowledge should not, of course, be taken to imply that this field is organized as a scientific discipline in an institutional sense. Much as Jennifer Mnookin (2001: 1745) has observed for American handwriting identification experts, fingerprinting can be viewed as another example of “forms of knowledge that lack extra-legal social institutions, such as universities or commercial research laboratories, through which to legitimize their authority.” The short history of the Fingerprint Society can be interpreted, in fact, as demonstrating one of the fates that can befall professional groups that lack independent support structures and resources such as those associated with established academic disciplines, which play various roles in the legitimization and propagation of professions (Abbott, 1988: 195–211).

That the members of this association so consistently appealed to the Ministry of Interior in their profession-building efforts suggests just how much they were dependent on the policing infrastructure in which they were already embedded for the realization of their new professional identity and interests. Ultimately, as much as the Advanced School might have provided a unique setting for imagining fingerprinting as a distinct field of academic knowledge and perhaps even as an autonomous profession, it also gave rise to inflated expectations about the possibilities for this particular model of expertise to be successful.

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Notes

1. An account of the proceedings and the text of the speeches were included in *Zhiwen zazhi* 指紋雜誌 ([1924], no. 2: 附錄, 4–8), the irregularly published journal of the Fingerprint Society. The first issue is accessible at the Beijing Municipal Archives (BMA), where it is appended to BMA J181-18-14572. The second and third issues were consulted at the main library of Peking University.
2. For an overview of such practices, see Zhao, 1997: 6–21. Hand and finger impressions were used to sign documents as early as the Tang dynasty (618–907), when signatures were also given in the form of dots or lines indicating the segments or shape of the parties' fingers (for more on this practice, see Niida, 1939). Hand and foot impressions were routinely given on Qing-period wife sale contracts, at times alongside the use of a cross or other mark to indicate the signature of the husband. Matthew Sommer (2015: 141–43) shows that making these inked impressions was an indispensable step in the "public ritual" of finalizing such contracts by demonstrating the husband's consent to the transaction.
3. For early twenty-first-century perspectives on these issues, see Cole, 2006; Cole, 2009; Breckenridge, 2014.
4. Elsewhere, the global proliferation of fingerprint identification practices was driven by factors that included racist assumptions about the untrustworthiness of colonial subjects and immigrants as well as anxieties about crime and anonymity that were generated by new patterns of global migration and urbanization. See Cole, 2002; Sengoopta, 2003; Rodriguez, 2004; Breckenridge, 2014; Takano, 2016; García Ferrari and Galeano, 2016.
5. For critical treatments of this concept, see Goodman, 2000, and Rogaski, 2004. In a study of how the Qing Empire used modern policing practices to demonstrate its status as a "civilized" state, Tong Lam (2010: 885n14) explores a specific dimension of the "semicolonial" condition: the ways formally sovereign states such as China "actively sought to remake themselves by appropriating the logic and language of colonialism." This approach is particularly useful for examining the history of fingerprinting, a field of practical knowledge that initially supported British colonial administration yet subsequently came to serve varied (non-colonial) political and social interests as it has been adopted by nation-states around the world (Breckenridge, 2014: 16–18, 164–95).
6. For general information on these classes and their instruction, see Anonymous, 1934b: 299–302; Hu, 1989 (1929): 475–80; Chen, 1935: 86–88; Han and Su, 2000: 500.

7. For information on the students' career paths, see tables in the following issues of *Modern Police* 現代警察: (1934) 1, 3: 110–16; (1934) 1, 4: 183–92; (1934) 2, 1: 303–22; (1935) 2, 3: 138–42.
8. For establishment of the fingerprinting program, see Tian, 1924d: 論說, 2; Hu, 1989 (1929): 476–77.
9. Xia's educational background is mentioned in Xia, 1935 (1922): Liu Bangji preface, 11, as well as in the Shanghai county gazetteer, 1975 (1935), 19.9a. Xia's age was given as 26 *sui* in Metropolitan Police Board, 1920: 16.
10. In 1924, Xia (1924a) claimed that he had “served as an official in the police for seven years,” thus suggesting that he began this career almost immediately after graduating.
11. For an example of such perceptions from the late 1920s, see Bourne, 1929: 26–28.
12. For more on the Henry system, see Cole, 2002: 81–94. As Chandak Sengoopta (2003: 141–45) discusses, there is evidence suggesting that Henry's assistants played a greater role than he did in devising the system.
13. In their discussion of the “celebrity aura” that came to surround English pathologist Bernard Spilsbury (1877–1947), a transitional figure in the emergence of the new paradigm of modern crime scene investigation in England, Ian Burney and Neil Pemberton (2016: 83) argue that intensive press coverage gave rise to “a cultural dynamo through which Spilsbury's identity as a real-life Holmesian sleuth was amplified, transmitted, and energized, significantly altering and expanding public expectations about his powers of detection.” One could argue that a similar phenomenon, albeit on a smaller scale, “amplified, transmitted, and energized” Xia Quanyin's public image as an expert in fingerprinting and detection.
14. For more on the meanings of *shiyān* during this period, see Lean, 2014; Judge, 2015.
15. See front cover of *Finger Print Magazine* 1, 1 (1919).
16. For more on anatomy as a source of authoritative knowledge about the body in early twentieth-century China, see Luesink, 2017.
17. Translation from Chan, 1973: 711. For the original, see Dai, 1982 (1961): 1.
18. For an overview of the rich (and multiple) philosophical meanings of *li*, see Chan, 1964.
19. Pan did not provide additional explanation of the meaning of *fenzi pailie* 分子排列, a term that, taken literally, would seem to refer to how molecules are arranged in relation to each other, not to the arrangements of atoms that make up individual molecules.
20. For the actual context in which this phrase (人心之不同, 如其面焉) was used, see Yang, 1982: Xianggong 31.12, *xia* 1193.
21. This point is also made by Cole (2002: 175) in his discussion of Henry Faulds' assertion that fingerprint examiners should have scientific training: “How much scientific knowledge was necessary to interpret fingerprint evidence? It required no scientific training at all to gain the visual acuity to analyze, interpret, compare, and testify about fingerprint evidence.” By contrast, Cole suggests, one

- would need scientific expertise to conduct research validating fingerprint identification techniques—for example, to study “how much matching ridge detail would be necessary to confidently link a latent print to one person to the exclusion of all others.”
22. For other pieces that touch on similar themes, see Li, 1924a; Liu, 1926a.
 23. For newspaper extracts describing this episode, see *Zhiwen zazhi*, no. 3 (1926): 50–51. Also see Anonymous, 1926.
 24. Also see Meng, 1926.
 25. To be sure, the association’s proposals did not share certain basic features of the “biometric state” that was established in South Africa and subsequently exported to various post-colonial states. As used by Breckenridge (2014: 8–19), this term refers quite specifically to a state that seeks centralized administrative capacity through the use of biometric identification techniques rather than relying upon locally oriented practices of information gathering, based on written records, that citizens play a greater role in producing.
 26. For other instances in which idealized fingerprint-based regimes of registration and surveillance have been planned or imagined, see Ruggiero, 2001: 192–96; Breckenridge, 2014: 196–99.
 27. Wang Yangbin held this position in the ministry until October 1922.
 28. The earlier Police Academy 警察學校 and Local Police Officers Training School 地方警察傳習所 established in Beijing in the first few years of the Republic had also been created as part of broader plans to regulate police education throughout the country. See Hu, 1989 (1929): 471–73; Han and Su, 2000: 497–98.
 29. The Advanced School saw several institutional and curricular changes over the late 1920s and 1930s, culminating in its reorganization as part of the Central Police Academy 中央警官學校 in 1936. Instruction in fingerprinting continued, albeit as one among many subjects in the regular curriculum and not as a separate specialized program. For the history of this school during the Nanjing decade and after, see Han and Su, 2000: 732–42.
 30. For a survey of fingerprinting in mid-1930s China as well as discussion of the early stages of this project of national standardization, see Police Administration Department, 1935: 153–57.

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