FINE PRINT

by Carolyn Fraser

the age of whorls:

FINGERPRINTING AND THE SEARCH FOR IDENTITY

During the 1920s in Detroit, Michigan, $2.50 would buy you a souvenir fingerprint record suitable for framing; for $3.00, a pocket-sized identification card in a leather case. Modern fears of kidnapping (particularly of children) or of sudden amnesia spurred law-abiding civilians to register their fingerprints with government agencies and private bureaus. The public's trust in dactyloscopy (fingerprinting technology) was evidence both of a desire to fix identity and its attendant characteristics (including race and class) and the need to control criminality by connecting the physical body of the criminal to a paper record created by the State. When first "discovered" in the mid-19th century, the near-microscopic whorls, loops and arches that pattern human fingertips promised the key to both understanding and ordering human life.

Fingerprints have been employed throughout time as marks of authorship or identity; however, in the 19th century, it was the observations of a British colonial official in India, William Herschel, and a Scottish missionary in Japan, Henry Faulds, that uncovered the potential of using the patterned forms as marks of individual identity. Faulds' research showed fingerprints to be unique and unchanging. This became the fundamental premise on which dactyloscopy was developed. It is crucially important to note that both men's observations were made in colonial contexts: the difficulties posed by imposing law (in Herschel's case) and religion (in Faulds') saw the two men struggling with questions of individual identity. For Herschel, the use of fingerprints bypassed problems he faced as a colonial administrator dealing with an unruly, illiterate and uncooperative native population. Faulds' vision for the future of fingerprinting was grander and of a philosophical bent: Influenced by Charles Darwin's evolutionary theory, Faulds believed that fingerprints might reveal information about the history of the species, race, individual character and even nature itself—fingerprints, he believed, might "lead us to the very centre of nature's forge."

The cultural confusion that marked the colonial endeavours of the 19th century was in many respects a reflection writ large of the profound changes taking place in metropolitan centres all over the world. The industrial revolution sparked mass migrations of people toward urban centres. The informal system of personal acquaintance and collective memory that had served to fix an individual's identity and to police his behaviour began to break down. Where once a criminal might be branded for life with a mark clearly visible to his fellow citizens, in the large, highly mobile urban centres that developed in the 19th century, a successful criminal could re-invent himself over and over, hidden in plain sight.

His book, *Suspect Identities: A History of Fingerprinting and Criminal Identification*, Simon Cole writes that the crimes that most fascinated the general public in the late 19th century were "crimes of identity and authenticity, in which the swapping or abuse of identity itself constituted the crime." Counterfeiting, forgery, impersonation, grifting—these are crimes that flourish in societies where identities are malleable and uncertain. Immigration heightened anxiety about "otherness." A government functionary noted difficulty "in the official identification of Chinese, Negroes, and other races, the features of which, at least to the Caucasian eye, offer hardly sufficient individuality to be at all times trustworthy."

Fields of study—anthropology and criminology—and technologies, including phrenology, anthropometry and dactyloscopy, arose in the late 19th century in response to the question of fixing individual identity and the anxieties provoked by the need to police individuals. In Britain, Francis Galton seized on fingerprinting as a key to hereditary phenomena. He hoped to find a relationship between pattern types and physical and mental characteristics. Galton's work later developed into the field of eugenics—its goal to create a superior human race by selective breeding. But despite extensive research, his study

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of fingerprint patterns did not yield the results Galton had hoped for: "No difference was found in the fingerprints of scientists, artists, men of culture or the lowest idiots in the London district."

Despite this, hereditary and morphological research continued long after Galton. In 1925, T.G. Cooke, the head of a Chicago fingerprinting school, noted that attempts to reveal character in fingerprint patterns "smack too much of phrenology, character reading, and all such black arts to be taken seriously." Somehow, in the 30 years between Galton's research programs and the institutional acceptance of fingerprinting in the 1920s, the practice was stripped of its claims to broader anthropological significance everywhere but on the amateur fringes of dactyloscopic research. Cole writes, "Instead, the fingerprint had become merely an indexical sign which referred the eyes of the authorities to another message—the text contained in the criminal record."

To do this, fingerprinting had to overcome a related, but rival technology: anthropometry. Devised in France in the 1870s by Alphonse Bertillon, anthropometry was a technique of measuring the human body and recording its dimensions. In doing so, police departments collected information about individual criminals that could be used to combat recidivism. If a criminal was discovered to have the exact measurements of a previous subject recorded in the police record, it was presumed that this was the same man. Punishments metered by the courts took this into account. The accumulation of information in the paper record also provided researchers with data that was used to refine theories about criminal types—a "sugar-loaf" skull shape, for instance, was seen as evidence of innate criminality. In this way, proponents of Bertillonage were building an archive that they hoped would enable them to detect latent criminality simply by observation of physical type, and thus, to prevent crime before it actually happened by policing those believed to be hereditary criminals.

Fingerprinting replaced anthropometry because it was believed to be more objective, and as such, fashionably modern. Unlike anthropometry, which required the mediation of an observer measuring and recording data, fingerprints recorded the actual body of the criminal. In 1909, a journalist noted, "The print of a finger is a document complete in itself." At the turn of the century, police and government departments saw in fingerprinting a technology that stood alongside other emerging technologies of duplication including "carbon paper, the message-recording machine, the machine that sets type and the press that prints thousands of copies to the hour." In 1922, Eduard Belin transmitted by wireless the first transatlantic facsimile of a fingerprint, from Bordeaux to Bar Harbor, Maine. Fingerprints, Simon Cole writes, "were literally inscriptions from the criminal body, which could be archived in the institutional memory of the bureaucracy (transmitted across time) or mobilised for transmission across space." To do so, however, modern bureaucracy faced the same difficulty that had plagued their 19th century forebears—classification and retrieval.

Faced with fingerprint evidence, police sought to compare prints or partial prints with up to hundreds of thousands of prints on record. Over time, systems of classification were implemented that sought to store prints using alphabetical and numerical codes; custom-designed pigeonholes and filing cabinets; techniques of sub-classification, sub-sub-classification, etc.; and more. In the race to accumulate fingerprint data, the fear was that, without workable classification systems, valuable data would be effectively entombed in a "statistical cemetery." Worse yet, for increasingly mobile societies, classification systems developed independently and idiosyncratically. Agencies were thus unable to share information easily even though technologies existed that would allow them to do so if the record could be successfully retrieved. The law-abiding citizen in 1920s Detroit, diligently recording his and his children's prints with a private fingerprinting bureau was, he thought, buying security. In fact, it was unlikely that the prints would be shared with another bureau in Detroit; sharing with an interstate or international agency was almost guaranteed to be impossible.

The history of the 20th century, it might be argued, is the history of the filing cabinet. Fingerprints, with their unique, infinite combinations of whorls, loops and arches, pose particularly difficult challenges to systems of classification and storage. Not surprisingly, fingerprint bureaus turned to automated data-processing technologies as early as the 1920s. These punch card sorters were proto-computers. Clarence Morrill, superintendent of the California State Bureau of Identification, enthusiastically remarked in 1919 that the sorter "works only with facts." Fingerprint records were supremely suited to the emerging punch card technologies; unfortunately, as had happened with 19th century manual classification systems, the automated systems developed independently before universal standards were established, creating incompatible archives of data. This situation remains true today in certain jurisdictions.

Biometric data—fingerprinting, retina scanning, voice spectrometry, hand geometry, computerised facial recognition and DNA sequencing—is still used to identify individuals. However, in an era of cyberspace and virtual reality, Simon Cole notes that soon "the body itself may become a rather antiquated way of defining the individual." Identity has expanded beyond the borders of our physical bodies. Where once it was suggested that the truly modern man's fingerprints would be void of any pattern at all, the 21st century sees the persistence both of these intriguing patterns and the questions they once provoked: *Who am I? Am I unique?*