

1 in 64 Billion  
Project description

*The chance that a random fingerprint would match a specified one [is calculated to be]*

$$1/2^{24} \times 1/2^8 \times 1/2^4 = 1/2^{36},$$

*“or 1 to about sixty-four thousand millions.”*

- Francis Galton via Stephen M. Stigler

In a world that presents so many assailments to our personhood, it is comforting to return to the notion that our fingerprints identify us uniquely without requiring any effort. As silent guardians of our identities, they come before we have personalities, stay with us after death, and in between spatter a trail of every dextrous interaction we have with our physical surroundings. And while it is possible (although extraordinarily rare) to be born without fingerprints, loss of fingerprints due to disease or injury is typically temporary. John Dillinger, the famed 20th Century bandit and gunman, reportedly burned off his fingerprints with acid to avoid police detection but was still able to be identified by them following his death.

Yet does the fact that every snowflake is unique prevent us from shovelling the multitudes of them unceremoniously into heaps to be cursed at until the spring thaw? Singling out a person by their fingerprints is usually a bad sign...and until CSI comes for us all, the fingerprints will be silently painting the trajectories of our lives across doorknobs and drinking glasses, credit card terminals and iPhone screens.

It is getting harder and harder to pick out individuals by any means these days, even with a sophisticated knowledge of dactyloscopy. The capabilities of DNA matching technologies are expanding daily, and though many uses of fingerprinting still exist, it's not hard to see a time when that discovery, too, will become obsolete. And then there's the issue of population: when Galton originally proposed the odds of finding two individuals with matching fingerprints, the world population was approximately 1.6 billion people. As of this writing, finding that match is now more than four times as likely as when Galton published his first work on the subject 123 years ago.

So that's what it comes down to, really. What is a unique identity in a world where so many already exist? Does the question of the "end of the world" really infer a loss of a sense of selfhood? And in a more practical sense, will humans as a species overwhelm the planet's ability to support us by sheer reproductive force?