

HENRY FAULDS
“A PIONEER OF
FINGERPRINTING”



1843-1930

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Plan:

I plan to do my investigation on Henry Faulds, He is the person I find most interesting in the history of fingerprinting.

Questions:

- 1 Did Henry Faulds research help with the development of fingerprint identification?
- 2 Is Henry Faulds the man who discovered methods of taking fingerprints?
- 3 Was Henry the man who discovered each person's fingerprint is unique?

Sources of information:

- 1 Internet
- 2 Library

Dr Henry Faulds was born in Beith, North Ayrshire in Scotland. He was born in 1843, into a wealthy family where his father owned a warehouse, but in 1855 the family lost most of their money in the western bank collapse. Henry then had to drop out of school and go work for his uncle. He didn't enjoy working there and at the age of 21 decided to take classes at Glasgow University to study mathematics, logic and classics. He then decided at the age of 25 that medicine was his true vocation, so he enrolled at Anderson's College Glasgow, where he obtained his physicians licentiate.

Dr Faulds then decided to travel to Darjeeling, India to work as a medical missionary with the Church of Scotland. He treated and cared for the people of Darjeeling for two years. He later met and married his wife and together they set up and ran a medical mission in Japan, which was the first Scottish one of its kind. Dr Faulds ran the hospital, but he also did many other things, he trekked into the mountains to heal the bedridden, set up lifeguard stations nearby local canals to prevent drowning, established a society for the blind, in which he devised a bible for them to read, using raised letters, which was an early type of Braille. He also halted a rabies epidemic which killed small children, and stop the spread of Cholera and typhoid into Japan, he became the first foreign doctor to be allowed to carry out post mortem, His hospital treated around 15,000 patients annually.

Faulds one day whilst looking at ancient Japanese fragments in his hands, he noticed that there were minute patterns of lines embedded into the clay. He had been teaching his students about touch and had noticed the swirls that were on his own fingers and realised that the marks on the clay had come from the potter's own fingers. He didn't at that moment realise how important his discovery was. He travelled to many markets to find other pottery, to examine if they contained the same minute patterns, it was whilst doing this that he saw the same patterns over and over again, and he then came to the conclusion that you could tell which potter had made the piece, as each was unique to each individual. Faulds paid little attention to this detail, at this time.

Faulds then started to look at fingerprints in a scientific way; he removed his own fingerprints and those of his students with chemicals and emery paper and discovered that the fingerprints grew back in exactly the same pattern. He started taking a collection of prints from his neighbours and friends and his collection grew to over a thousand. He started to record them by sketching the ridges, then by recording them in wax, he then thought of the technique of inking the fingerprints and recording the impressions onto paper, a technique which is still used today in policing

| | | | | | |
|--|--------------------|------------------------|---|------------------------|--|
| 340 | | RAS | | LEAVE THIS SPACE BLANK | |
| Name MALCOLM LITTLE | | Classification 92Aa 10 | | | |
| Alias | | Ref. 1aB | | | |
| No. | Color BLACK | Sex MALE | | | |
| 1--Right Thumb | 2--R. Index Finger | 3--R. Middle Finger | 4--R. Ring Finger | 5--R. Little Finger | |
| 6--Left Thumb | 7--L. Index Finger | 8--L. Middle Finger | 9--L. Ring Finger | 10--L. Little Finger | |
| Four fingers taken simultaneously Left hand | | | Four fingers taken simultaneously Right hand | | |
| Amputations RAS | | | | | |
| Left Thumb | | Right Thumb | | | |
| Impressions taken by <i>John F. ...</i> | | | Prisoner's signature <i>Malcolm Little</i> | | |
| Classified by | | | Verified by | | |

Example of a fingerprint sample taking by police.

He wrote to hundreds of scientists all over the world asking for help and research in collecting fingerprint samples, but he received almost no reply, and his study came to an end, until a few months later when his own hospital was burgled, the local police arrested a member of his staff, but Faulds was convinced of his innocence, so he went and examined the crime scene and spotted there were a set of sooty fingerprints, so he lifted them and looked at them more closely and realised that the police had the wrong person, as his fingerprints didn't match the set he had lifted, so the police released the suspect.

Another incident in which Faulds used his research was when there was another burglary and the police asked Faulds for his help, at the crime scene he found a ten-finger impression of prints left on a mug, he then compared the prints he found with the collection that he has built up and he found a exact match with a servant of a nearby house, when the servant was confronted with the evidence he confessed, this was the first time that fingerprints found at a crime scene proved to be damning evidence of guilt Faulds realised that his development in forensic investigation could help police when criminals used fake names and get lighter sentences, his conception was similar to

William Herschel's although Faulds didn't know it at the time, Herschel had a year earlier introduced fingerprinting as a type of signature to authenticate documents in Hooghly India, Faulds idea had a lot more ramifications as he realised fingerprints could help solve the problem of identification which troubled the British legal system.

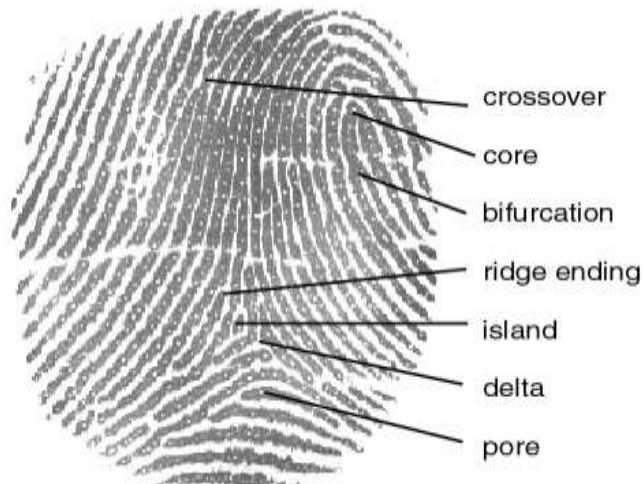


Figure 1

Details on fingerprints.

Faulds didn't really want to publish his idea, he was disturbed by the fact that what if someone was wrongly identified and was made to suffer, he thought that there were a lot more work to be put into his research before he decided to publish it, so he set out to prove that fingerprints were unique to each individual and that they stayed the same throughout the person's life.

He then decided to write to his own scientific hero, Charles Darwin, and explained his research and ask if he could pass on his information on to some people he knew, Darwin was too old to help so he passed on Faulds information to his cousin Francis Galton, who promised to help out Faulds but never got back in touch with him. Instead Galton decided to work with William Herschel to improve his development of his research on using fingerprints as a signature. Galton and Herschel removed all Faulds prints from his research and passed it off as their own. Faulds decided to then work and publish details of his research on fingerprinting ideas and pleas for further investigation into his research; in the journal he mentioned the use of bloody finger marks or impressions in clay etc for use in scientific identification. He also suggested the use of registers to be kept with the prints of important and well known criminals.

It was the first letter of its kind to suggest the basic use of the fingerprinting system which we use today, but much to Faulds disappointment nobody was

greatly interested in his discovery, the only notable response was a reply from William Herschel in which he mentioned the fact he had been using fingerprinting as a method of signature, with Herschel's account of his application of fingerprints, it did little to kindle any more interest in Faulds's ideas.

Table 1 is statistics for the USA, it shows percentages of arrests due to fingerprinting evidence and how many of the arrests resulted in convictions for the criminals. For example 65% of arrests in the last 5 years, 40% of them resulted with convictions.

He was in contact with Scotland Yard with a view into setting up a fingerprinting bureau at his own expense, but Scotland Yard regarded him as a crank. He then decided to move back home to Britain with his research going nowhere and his wife was ill, Galton and Herschel were trying to promote themselves as the fingerprinting pioneers, by their own version of events, Herschel as the inventor and Galton as it developer.

Faulds never got the recognition he deserved for his years of research and the discoveries he made. Convinced that his ideas had been stolen he moved his family so he could take over the practise of a club doctor, treating the poor for a penny a week subscriptions. For 25 years he campaigned for the recognition he deserved, he even challenged his rivals for a fight over their honour as gentlemen. He was a very bitter man until he died in 1930 he was a forgotten man, until two Americans came across his grave after reading a book by George Wilton who championed Faulds case for a place in history, he managed to win Faulds's two daughters two government payments on the condition of secrecy. Today the fingerprinting society in the UK pays for the yearly upkeep of Faulds grave, on the new stone are the words "In Memory of Henry Faulds in recognition of his work as a pioneer in the science of fingerprint identification" . There is also talk about there being a street named after him in his home town in Beith and also a museum dedicated to their famously forgotten son. So after 70 years after his death Henry Faulds has finally got the recognition that he deserves as the man who invented fingerprinting.

Conclusion

After finding out everything that I did about Henry Faulds, I realised that he was just a normal man who worked really hard all his life to discover and improve something that he believed in. He quit working so he could have a better education for a better chance in life.

After the years of research that he put into developing the study of fingerprints he deserved to be acknowledged better in the scientific world that he did. He saved thousands of lives with his hospital, and developed many things that helped improve the lives of the people of Japan. When Galton and Herschel took Faulds's research and passed it off and developed it as their own, Faulds didn't back down and fought for his rights.

I believe that Faulds is the true pioneer of fingerprinting, and without his discoveries many suspect would not be punished for their crimes today, although it is far more advanced today than Faulds would have ever known it could be.

Bibliography

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Evaluation

I found this investigation really interesting, although it was quite hard to find a lot of relevant information on Henry Faulds. Much of the information I found was repeated and not very helpful. It was even harder to find relevant pictures and graphs as there were not many databases back when he did his research.

Although the information that I found was really interesting and helped me find out more about the history of fingerprinting.