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Criminal Identification and Fingerprint Technology in England and Norway at the Dawn of a New Era

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ABSTRACT: The article focuses on the development of fingerprint and other methods of criminal identification in England and Norway between the late nineteenth and the first decades of the twentieth century. The research investigates both the theoretical value and the practical utility of criminal identification methods, by analysing their strengths and weaknesses in a constantly evolving scenario. To achieve this purpose, the article will examine a number of case studies, which gave rise to passionate debates in the legal world as well as in public opinion. Particular attention will be paid to two trials which took place in early twentieth century: these cases deserve special consideration because for the first time fingerprinting proved to give decisive evidence to establish the identity of the culprits. Such trials therefore opened the doors to a new era, characterized by the use of fingerprint technique, which in the following decades would become a most reliable identification method.

KEYWORDS: England, Norway, Criminal identification, Fingerprints, Jury Trials.

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1. *Introduction**

> I came to court today with a smile on my face and immediately asked the public prosecutor how he could put on trial a man on the basis of a fingerprint here in the country so little known. But during the test at the Identification Bureau all my doubts were dispelled[1].

These few but significant words give the essential feature of a trial destined to go down in the Norwegian history of crime and justice. With these words, the president of the criminal court located in Kristiania (the former name for Oslo) praised the work carried out by the Head of the Identification Bureau, Waldemar Hansen. The case itself had no extraordinary elements: the defendant had been charged with a series of burglaries committed in the area of Oslo in the spring of 1910. The innovative and noteworthy element consisted in the proof gathered against the accused. As Hansen pointed out, the incriminating evidence was a fingerprint found during the inspection at the crime scene: for the first time in the Norwegian history, a man was put on trial on the basis of a form of evidence which had been almost unknown in the country until then[2].

At the dawn of the twentieth century, indeed, fingerprint technology was very little studied in Norway. One of the few to have dealt with the matter was Anders Daae who, at that time, was director at Botsfengselet, a well-known prison in Grønland, a neighbourhood in central Oslo. Daae devoted many years to study the methods to be used for the identification of the criminals: at first, his research was mainly focused on the anthropometric system, but at the beginning of the twentieth century the Norwegian doctor turned his attention to

* Early results of this research have been presented at the *9th Norwegian Conference on the History of Science,* held at the Norwegian University of Science and Technology in Trondheim, November 29 – December 2, 2023. I would like to thank everyone present at the session, especially Professor Jon Røyne Kyllingstad (Museum of Cultural History, University of Oslo) and Dr. Ageliki Lefkaditou (Department of Community Medicine and Global Health, University of Oslo) for their comments and recommendations. In addition, I thank Professor Geir Heivoll (Politihøgskolen - The Norwegian Police University College) and Dr. Per Jørgen Ystehede (Department of Criminology and Sociology of Law, University of Oslo) for their helpful suggestions.

[1] «Jeg kom i retten idag med smil på leben og spurte straks statsadvokaten hvorledes han kunde finne på å sette en mann under tiltalte på grunnlag av et fingeravtrykk - her hjemme som det var så lite kjent. Men under kontrollprøven i Signalementskontoret blev alle mine tvil bortrydded». W. Hansen, *Fingeravtrykk og signalement*, Oslo 1932, p. 41. All the translations from Norwegian to English proposed in this article are mine.

[2] The case will be examined at paragraph n. 6.

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fingerprinting, which was now taking on a strategic importance[3]. Daae believed it was vital to improve his knowledge on the matter by analysing the techniques in use in other countries: for this very reason, he undertook a number of study trips throughout Europe, from Denmark to Germany, from France to England, where he had the opportunity to delve into the research carried out by eminent scientists and criminologists. The late nineteenth century, in fact, was a decisive period for the development of the techniques to be used in criminal detection, from anthropometry to dactyloscopy[4]. With special reference to fingerprint identification, a fundamental role was played by Francis Galton and Edward Richard Henry, whose studies would soon achieve global success.

Galton is renowned for producing extensive research contributions on finger marks and their potential use for personal identification: fingerprints indeed «have the unique merit of retaining all their peculiarities unchanged throughout life, and afford in consequence an incomparably surer criterion of identity than any other bodily feature»[5]. In 1892 Galton published a book which would soon become a best seller in the history of fingerprinting, whose title was, simply but effectively, *Finger prints*. Another volume destined to great fortune was *Classification and Uses of Finger Prints* (1900) by Edward Richard Henry, Inspector-General of Bengal Police[6]. In a few years, the Henry classification system became a role model for experts and scholars from all over the word.

One year after the publication of the book, Henry was appointed Assistant Commissioner at the Criminal Investigation Department in London. Returned to England to take up the position, he became the director of the newly established Fingerprint Bureau, which marked the start of a new era. The competences acquired in those years proved to be decisive in the resolution of a murder which took place in 1905 in Deptford, an area in south east London. The affair went down in history as the Stratton brothers' case, by the name of the two brothers – Alfred and Albert Stratton – who were accused of having committed the crime[7]. As we will see, in this case the investigation took a turning

[3] Biographical information about Anders Daae can be found here: *Norges læger 1800-1908 [Norwegian doctors 1800-1908]*, I, Kristiania 1908, pp. 228-229 and *Norsk biografisk leksikon [Norwegian biographical encyclopaedia]*, III, Oslo 1926, pp. 168-169. Anders Daae's life and work will be examined at paragraph n. 5.

[4] Criminal identification was the subject of an intense debate between the late nineteenth and early twentieth century. At that time, the police archives represented the site where new identification technologies were developed and tested. For an overview on the matter: I. About - V. Denis, *Histoire de l'identification des personnes*, Paris 2010, pp. 71-94.

[5] F. Galton, *Finger prints*, London 1892, p. 2.

[6] E. Henry, *Classification and Uses of Finger Prints*, London 1900.

[7] This historical event made into a book published a few years ago: G. Hogg, *The Deptford*

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point due to the discovery, and subsequent analysis, of a finger print which was found by the police officers at the crime scene. A few weeks after the conclusion of the trial, the news of the affair reached Norway, where fingerprint technology was taking its first steps[8].

The present article aims at analysing these highly significant events in the history of fingerprint identification, by focusing the attention on the use of the new technique in criminal investigation in England and Norway respectively. The choice fell on these two countries for specific reasons. On the one hand, the origin and evolution of forensic science in England represented a reference model that scholars from other nations necessarily must know, even if they then decided to adopt different solutions[9]. On the other hand, I chose to examine the history of fingerprint identification in Norway, because the events which occurred in the Nordic country in the first part of the twentieth century reveal both the theoretical value and the practical utility of the new method, as a demonstration of the close relation existing between theory and practice[10].

mask murders: the story of Alfred and Albert Stratton, United States of America 2020.

[8] On Tuesday 27 June 1905 the Norwegian newspaper *Glommendalen* provided his readers with the details of the case. *Glommendalen*, 27 June 1905: *En engelsk dødsdom* [An English death sentence].

[9] On the development of forensic sciences in Britain: A. Adam, *A History of Forensic Science. British Beginnings in the Twentieth Century*, London and New York 2016. For a comparative overview: J. Thorwald, *The Century of the Detective*, New York 1965 [Italian edition: Id., *La scienza contro il delitto: la dattiloscopia, la medicina, la tossicologia e la balistica al servizio della legge in cento anni d'investigazione*, Milano 1965]; S. Bell, *Crime and Circumstance. Investigating the History of Forensic Science*, Westport Connecticut 2008; Ead., *Dictionary of Forensic Science*, Oxford 2012; B. Madea (ed.), *History of Forensic Medicine*, Berlin 2017; I. Burney - C. Hamlin (eds.), *Global Forensic Cultures. Making Fact and Justice in the Modern Era*, Baltimore 2019. With particular reference to the history of fingerprints: C. Beavan, *Fingerprints. The Origins of Crime Detection and the Murder Case that Launched Forensic Science*, New York 2001 [Italian Edition: Id., *Impronte digitali. Scotland Yard e la nascita della criminologia moderna*, Milano 2002]. See also the studies carried out by Simon A. Cole, in particular: S. A. Cole, *Suspect Identities. A History of Fingerprinting and Criminal Investigation*, Cambridge-London 2001 and *History of Fingerprint Pattern Recognition*, in N. Ratha - R. Bolle (eds.), *Automatic Fingerprint Recognition Systems*, New York 2004, pp. 1-25.

[10] Historiography on fingerprinting in England is considerable, while bibliographical references on the origin of fingerprinting in Norway are extremely scant. We have however more information on the history of the Norwegian police from the nineteenth century to the present day. A team of scholars is now leading a project on the history of the Norwegian police from 1686 until 2016. The project members are working with the National Museum of Justice in Trondheim, where it is possible to visit interesting exhibits and explore a large collection of objects and photos. The Museum currently hosts the exhibit *Clues*, which investigates the modern methods of analysis developed in nineteenth and twentieth century Norway. See:

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The research will bring to light a number of points of contact between the English jurisdiction and the Norwegian experience, although the two countries had different criminal justice systems. This connection became particularly evident during the trial of Adolf Beck, a Norwegian businessman who found himself involved in a legal case whose fame has survived down to the present days[11]. As will be explained, the main question in the Beck case was the assessment of the identity – or non-identity – of two men suspected of having committed a series of crimes in central London: the identification of the offender, therefore, played a central role in this story.

The trial of Adolf Beck, along with other famous cases which took place on the threshold of the twentieth century, raised a new awareness on the fallibility of human testimony and, consequently, on the need for more effective means of identification. This new consciousness led to an increasing use of fingerprint technology in criminal investigation: this happened, at different times and in different ways, in England, in Norway, as well as in many other countries around the world[12].

2. Searching for a reliable method of criminal identification

The history of fingerprinting is a very difficult subject, that certainly cannot be exhaustively addressed in a few pages. Here we will not investigate the matter in its entirety, nor we will take a position on the disputed question about who was the true and first 'father of fingerprints' in criminal identification. The purpose of these pages is to better understand the background that led to the establishment of the Metropolitan Police Fingerprint Branch at New Scotland Yard at the dawn of the twentieth century (1901). As we are going to see, the creation of this bureau represented a defining moment for the use of fingerprint technology in criminal investigation, thus helping to improve law enforcement performance in just a few short years.

As pointed out by Colin Beavan more than twenty years ago[13], the first scholar to use fingerprint technology in the history of the United Kingdom was

https://justismuseet.no/en/front-page/ (consulted on 15 January 2023).

[11] A report of this famous case was published by E. R. Watson in 1924: E. R. Watson, *Adolf Beck (1877-1904)*, Edinburgh and London 1924. On the matter see also T. Coates, *The Strange Story of Adolf Beck*, London 2001.

[12] For an overview of the countries which chose to adopt fingerprint technology in the early years of the twentieth century: J. Thorwald, *The Century of the Detective*, cit., pp. 81-83.

[13] C. Beavan, *Impronte digitali*, cit., p. 48.

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William James Herschel, who in 1850s worked as British administrator and magistrate for the East India Company in Bengal[14]. Herschel decided to make use of the new technique for a specific reason, that is the desire to force those who had entered into a contract to fulfil their commitment[15].

Herschel, therefore, did not originally conceive fingerprints as a tool to identify criminals. This potential application of the new technique emerged only at a later time, thanks to the studies carried out by Herschel himself and by other scientists.

Most notable among these was Henry Faulds, a Scottish doctor who in 1874 was tasked with the first Scotland's medical mission in Japan[16]. While he was there, Faulds attended an archaeological dig where he found «some specimens of 'prehistoric' pottery». As he himself explained in an article published in the scientific journal *Nature* in October 1880, his attention was directed on certain finger marks left on the clay when it was still soft: that's how Faulds began to study the character of the skin-furrows in human fingers[17]. In the following years, the doctor analysed a growing number of fingerprints of people from Japan and other nationalities, and reflected on their potential use in many different areas, including criminal investigation. Faulds realized that a fingerprint found at the crime scene could lead «to the scientific identification of criminals», thus helping to solve a burgeoning problem for police work[18].

At that time, indeed, criminal identification was a thorn in the side of police departments in several countries. The practice of filling out identification notes equipped with photographs was useful but not decisive, especially when the suspect provided a false identity. The problem, which was taking on considerable proportions, required an immediate and effective response based on objective criteria. A solution was offered by the French criminologist Alphonse

[14] Colonial India therefore was «the cradle of the modern fingerprint system»: S. A. Cole, *History of Fingerprint*, cit., p. 2.

[15] The new technique was used for the first time in 1858. In his book *The origin of finger-printing* published in 1916, Herschel wrote as follows: «It happened, in July of that year, that I was starting the first bit of road metalling at Jungipoor [...] A native named Rājyadhar Kōnāi, of the village of Nistā, came to terms with me and at my desire drew up our agreement in his own hand, in true commercial style. He was about to sign it in the usual way, at the upper right-hand corner, when I stopped him in order to read it myself; and it then occurred to me to try an experiment by taking the stamp of his hand, by way of signature instead of writing [...] I was only wishing to frighten Kōnāi out of all thought of repudiating his signature hereafter». W. J. Herschel, *The origin of finger-printing*, London 1916, pp. 7-8.

[16] S. A. Cole, *History of Fingerprint*, cit., p. 2.

[17] H. Faulds, *On the Skin-furrows of the Hand*, in «Nature», 28 October 1880, p. 605.

[18] C. Beavan, *Impronte digitali*, cit., pp. 74-79.

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Bertillon, who in March 1879 had been employed at the Identification Bureau of the Paris Police Department[19]. As well known, the system developed by Bertillon – so called *Bertillonage* – made use of specific body measurements (head length, head breadth, length of the middle finger, length of the left foot, etc.), by which the police could identify criminals with a high level of precision. The identification technique created by Bertillon included a detailed physical description of the person: this description – displayed on a single card – designed a *portrait parlé* (*speaking portrait*) of the suspect person[20].

In just a few years the system developed by the French criminologist achieved a huge success both within and outside national borders. *Bertillonage* aroused the attention of Francis Galton, who in 1888 went to Paris and met Bertillon, thus having the opportunity to better understand his method[21]. In the same year Galton prepared a lecture on personal identification for the Royal Institution: although the principal object was the anthropometric system developed by Bertillon, Galton decided to treat the topic in a broader sense and raised some questions on the value to be assigned to fingerprints. It was in this occasion that he realised «how much had been done and how much there remained to do, before establishing their theoretical value and practical utility»[22].

At first, Galton's interest in fingerprints was «linked to his work as a naturalist»[23]: the British anthropologist, in fact, tried to figure out if fingerprints could be used to indicate race and heredity background, but these «great expectations» were soon disappointed[24]. The Victorian scientist, however, did not

[19] S. Bell, *Crime and Circumstance*, cit., p. 152.

[20] On Alphonse Bertillon and his identification technique see: P. Piazza (ed.), *Aux origines de la police scientifique. Alphonse Bertillon, précurseur de la science du crime*, Paris 2011. For further information: P. Piazza, *Un œil sur le crime. Naissance de la police scientifique. Alphonse Bertillon de A à Z*, Bayeux 2016. See also: P. Piazza - R. Marlet, *La science à la poursuite du crime. D'Alphonse Bertillon aux experts d'aujourd'hui*, Paris 2019.

[21] This is how Galton described the encounter with Bertillon in his autobiography *Memories of My Life*, first published in 1908: «I made the acquaintance of M. Bertillon during a short visit to Paris, and had the opportunity of seeing his system at work. Nothing could exceed the deftness of his assistants in measuring the criminals; their methods were prompt and accurate, and all the accompanying arrangements excellently organised. But I had no means of testing its efficiency with closeness, which would have required more time and interference with current work than was permissible». F. Galton, *Memories of My Life*, London 1908, p. 251.

[22] F. Galton, *Finger prints*, cit., p. 2.

[23] S. Bell, *Crime and Circumstance*, cit., p. 151.

[24] Galton's studies had produced no evidence «that a generic criminal type could be detected from physiognomic representations». G. Pavlich, *The subjects of criminal identification*, in «Punishment & Society», 11, 2 (2009), p. 181.

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give up and continued his experiments in order to prove that finger marks did not change over the course of a lifetime. This scientific research activity resulted in the publication of the book *Finger Prints*, edited by Macmillan & Co. in 1892. In the first pages of the volume, Galton identified «a few scattered instances» of persons who had studied the topic: Faulds was barely mentioned, while Herschel was widely praised for the incomparable value of his research[25].

The publication of Galton's book led to a debate over the methods that the competent authorities should use in order to identify habitual criminals[26]. Realising that the topic deserved thorough investigation, in October 1893 the Home Secretary Herbert Henry Asquith appointed a commission led by Charles Edward Troup – the future Permanent Under-Secretary of State at the Home Office – to report «whether the anthropometric system or the finger-mark system can with advantage be adopted in England either in substitution for or to supplement the existing methods, and if so, what arrangements should be adopted for putting them into practice»[27].

In deciding which technique should be adopted, the commission considered two different perspectives: on the one hand, the method used by police officers to take the measurements or fingerprints promptly and accurately; on the other hand, the construction of a system of classification which allowed to identify the criminals readily and with certainty[28]. In the first respect, the committee was impressed by the excellence of Mr. Galton's system: the detection of

[25] Galton explicitly stated that he was indebted to the «regular and official employment made of finger prints by Sir. William Herschel, during more than a quarter of a century in Bengal». The Victorian scientist had no doubt: «If the use of finger prints ever becomes of general importance, Sir William Herschel must be regarded as the first who devised a feasible method for regular use, and afterwards officially adopted it». F. Galton, *Finger prints*, cit., pp. 27-29.

[26] It must be borne in mind that, around the same time, other scholars in other countries began to use fingerprints as a method of identification, for instance the anthropologist Juan Vucetich, who in 1889 had been appointed as Head of the Statistic Section at the Buenos Aires Province Police Department. Vucetich had devised his own fingerprint classification method – the Vucetich's system – in 1891; in 1892 (the same year of Galton's book) the Argentinian police official demonstrated the utility of fingerprint evidence in a murder case which took place in Necochea, a city in the southwest of the Buenos Aires Province. As written by Julia Rodriguez, the 1892 murder case represents «the world's first criminal conviction based on fingerprint evidence». J. Rodriguez, *South Atlantic Crossings: Fingerprints, Science, and the State in Turn-of-the-Century Argentina*, in «American Historical Review», 109, 2 (2004), p. 387. For further details on this famous case see also: C. Beavan, *Impronte digitali*, cit., pp. 113-116 and J. G. Barnes, *History*, in *The Fingerprint Sourcebook*, Washington 2011, pp. 13-14.

[27] F. Galton, *Fingerprint Directories*, London 1895, p. 8.

[28] *Ibid*, p. 17.

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fingerprints, indeed, turned out to be «an easy mechanical process which with very short instruction could be performed by any prison warder»[29]. On the other side, the method of classification appeared to be «the strongest point in favour of Mr. Bertillon's system». As written in the report, in fact, the scheme developed by the French criminologist made it possible to find the identification note of the criminal «as certainly and almost as quickly as an accurately spelt word could be found in the dictionary»[30]. The two methodologies, therefore, should complement each other in order to neutralize their weaknesses. Thus, in conclusion, the committee proposed a system «which borrows Mr. Bertillon's admirable method of classification, and at the same time embodies the practical results of Mr. Galton's investigations»[31]. The success of the recommended system – the commission was perfectly aware of this – could come «only with time and by means of the hearty co-operation of all concerned in its working»[32].

The inquiry carried out by the committee had highlighted the weak point of the technique proposed by Francis Galton, that is the difficulty to find the criminal's record file within a large collection amounting to many thousands of imprints. Further research was therefore necessary to make the system more practical and effective. In those same years, the Inspector-General of Bengal Police, Edward Richard Henry, was working exactly in this direction.

In 1892 Henry had introduced the anthropometric method in the Bengal Police Department, but the system had not given the desired results; thus the General-Inspector had decided to include the use of thumbprints to make the identification easier and more certain. In 1894 Henry visited Galton's laboratory and discussed with him the advantages of dactyloscopy, provided that an efficient classification system was developed[33]. This result was achieved thanks to the studies carried out by two Indian police officials – Qazi Azizul Haque and Hem Chandra Bose – who worked out a mathematical formula for classifying fingerprints. In just a few years (1897), they developed a very effective method, which allowed to find the criminal's record file with extreme rapidity[34]. In 1900

[29] *Ibid*, pp. 17-18.

[30] *Ibid*, p. 19.

[31] *Ibid*, p. 8.

[32] *Ibid*, p. 30.

[33] C. Beavan, *Impronte digitali*, cit., pp. 135-136.

[34] G. S. Sodhi-J. Kaur, *Scientific Racism faced by Indian Fingerprint Scientists during Colonial Rule: Need to correct a Historical Wrong*, in «Journal of Scientific Temper», 10 (2022), pp. 52-69. On the development of forensic science in colonial India: S. Basu, *Forensic Science and Scientific Measures of Criminal Identification in British India*, in «Indian Journal of History of Science», 54, 2 (2019), pp. 189-201 and Id., *The History of Forensic Science in India*, New York 2021. With

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Henry published his book *Classification and Uses of Finger Prints*: from then on, the system developed by Haque and Bose went down in history as the «Henry classification system»[35].

The success achieved by the publication of the book earned Henry a promotion to Assistant Commissioner at New Scotland Yard: so it was that in 1901 Henry returned to England and took office at the Criminal Investigation Department (C.I.D.). The Metropolitan Police Fingerprint Branch, which obviously used the Henry classification system, was established in July of the same year[36]. Within a few months the Fingerprint Bureau went into full operation: before the end of the year, Henry reorganized the identification arrangements and trained the police officers using the fingerprint system, thanks to which dozens of habitual criminals were soon identified. According to the Assistant Commissioner Melville Macnaghten, who worked side by side with Henry at the Criminal Investigation Department, in a short while the identification of the criminals became as quick as it was clever[37].

Not even a year later, the new technique proved to be decisive in identifying the person responsible for a burglary committed in an area located in the London Borough of Southwark[38]. The crime took place in the billiard room of a building in Denmark Hill: while breaking into the room, the burglar left his thumbprint upon the freshly painted window sill. An officer of the Fingerprint Bureau, Detective Sergeant Charles Collins, took an impression of the mark for the purpose of comparing it with that of the suspect. Shortly after, a man named Harry Jackson was arrested and Collins was able to prove that the fingerprint found at the crime scene belonged to him. At the trial, the Detective gave the following testimony:

particular attention to the origin of fingerprinting: C. Sengoopta, *Imprint of the Raj: How Fingerprinting was Born in Colonial India*, London 2003.

[35] Henry did not acknowledge the role played by Haque and Bose, whereas he praised the work carried out by William Herschel and Francis Galton. About the latter, he wrote as follows: «Mr. Galton has discussed the all-important question of Persistence, and has proved that the details of the ridges constituting the patterns of finger impressions persist throughout the whole period representing the life of man, those found on the fingers of the newborn infant being traceable on the fingers of the same person in old age and apparently effaceable only when after death decomposition sets in». E. Henry, *Classification and Uses of Finger Prints*, cit., p. 5.

[36] C. Beavan, *Impronte digitali*, cit., p. 148.

[37] M. Macnaghten, *Days of my years*, London 1914, p. 147.

[38] C. Beavan, *Impronte digitali*, cit., pp. 151-153.

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> On June 28th, in consequence of information, I went to 156, Denmark Hill, and took a photograph of a print on the sash of a window in the billiard room – I produce the negative, the enlargement, and some prints from the enlargement – on August 7th. I went to Brixton Prison and obtained a print of the prisoner's hand – I compared it with the impression on the window sash, and with a print of the prisoner's hand, which we had at Scotland Yard, taken on July 24th, 1901, and have no hesitation in saying that they are identical – the print on the window sash is that of the prisoner's left thumb[39].

Then the prisoner was found guilty and sentenced to seven years of penal servitude.

The case created quite a sensation in public opinion: actually, as written by the *Worcestershire Chronicle*, Jackson «can boast the proud distinction of being the first man convicted in England by means of fingerprints»[40]. Along the same line, *The Weekly Dispatch* wrote as follows: «[t]he present session of the Old Bailey offers the first instance in which a prisoner has been convicted in an English criminal court upon evidence supplied by his own finger-prints»[41].

As can easily be understood, the Jackson case arouse a great deal of interest amongst the crime fighting professionals. Although some suggested caution[42], gradually the idea became established that fingerprint technology made it possible to overcome the limits of the anthropometric system[43] and other methods

[39] *The proceedings of the Old Bailey, September 1902*. The record of the proceeding is available online at: https://www.oldbaileyonline.org/record/t19020909-686 (consulted on 18 January 2024).

[40] *Worcestershire Chronicle*, 20 September 1902: *Law and Police*.

[41] *The Weekly Dispatch*, 21 September 1902: *Finger-prints as a means of identification. A simple method and how it works. Scotland Yard and the system.*

[42] As an instance, we can mention the article published by *The Morning Leader London* on Tuesday 16 September 1902: *Finger prints. How they sometimes assist Scotland Yard. Not an infallible system for detecting criminals*.

[43] At that time, the dactyloscopy was proving its superiority over the anthropometric system in several countries around the world. The famous «Will West case» is often mentioned in this regard. In May 1903, a man named Will West entered the United States Penitentiary at Leavenworth and was subjected to the standard identification techniques, that is photographs, a physical description and anthropometric measurements. A prison clerk noted that West's measurements and description matched him to the record of William West, who had previously been convicted for murder. Will West denied being that man: the two men, indeed, were not the same person, as the prison clerks realized when it was discovered that William West was already in prison at Leavenworth. Will and William West, who had the same measurements (and even the same name), could be distinguished only by fingerprints. This case would have marked «the death of Bertillonage». Actually, as demonstrated by Simon A. Cole, the story of Will West was fabricated and designed «to make precisely this point»: S. A. Cole, *Suspect Identities*, cit., pp. 140-144. Regardless of this specific case, there

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of identification, especially those that were based on subjective criteria or personal impressions. It was the case of eyewitness testimonies, whose reliability could be somewhat questionable, as demonstrated by the trial of Adolf Beck.

3. *Norwegian businessman Adolf Beck on trial at the Old Bailey*

The story of Adolf Beck will remain «one of the most remarkable instances of a genuine miscarriage of justice resulting [...] from a singularly sinister combination of unhappy coincidences, such as can seldom happen in the legal history of any country»[44]. With these words, the author Eric R. Watson highlighted the exceptional nature of the Beck case, which was about to be included in the *Notable British Trials Series*. Published in 1924, Watson's book reconstructed the whole story from the beginning to the epilogue, trying to investigate what had happened and why.

Adolf Beck was born in Kristiansund, a small town located in western Norway, in January 1841. At the age of sixteen, he began to work in a merchant's office, but that life did not suit him, so he decided to go to sea for a year. Arrived in Cardiff in 1865, Beck lived in England until the end of 1868, when he left the country to go to Uruguay; after sixteen years spent in South America, he returned to England in May 1885. In 1888 he went to stay at the Covent Garden Hotel; in 1893 he moved to the Buckingham Hotel; finally, in September 1895, he moved into an apartment in Victoria Street, where he remained until his arrest a few months later[45].

The «martyrdom»[46] of the Norwegian businessman began on 16 December 1895, when a woman – Ottilie Meissonier – saw Beck on his doorstep and accused him of being the man who had robbed and defrauded her a couple of weeks earlier. Aware that the woman was about to charge him, Beck turned to a policeman on duty at the crossroads between Vauxhall Bridge Road and Victoria Street: the policeman took both the parties to Rochester Row police station where the woman's charge was officially filed. As a consequence, Beck was placed under arrest. Subsequent investigations revealed that in the previous two years many other women had been robbed and defrauded by a man who had

were a number of reasons in favour of fingerprint identification, with special reference to the difficulty of taking Bertillon measurements with a high degree of accuracy and their possible change over time.

[44] E. R. Watson, *Adolf Beck*, cit., preface.

[45] *Ibid*, pp. 1-3.

[46] H. Potter, *The 'Martyrdom of Adolf Beck' and the Creation of the Court of Criminal Appeal*, in Id., *Law Liberty and the Constitution. A Brief History of the Common Law*, Suffolk 2015, pp. 261-266.

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used the same *modus operandi* described by Ottilie. Summoned to make an identification, the women identified Adolf Beck as the culprit[47].

On 3 March 1896 the Norwegian businessman was put on trial at the Old Bailey. The prosecutor's thesis was based on the assumption that Adolf Beck was already known to law enforcement under the name of John Smith. As explained by Watson, in 1877 a man named John Smith had been charged with larceny and sentenced to five years of penal servitude. The defence argued that the accused had been victim of a mistaken identity: the man who had committed the crimes in 1894 and 1895 actually was the man who had been convicted in 1877, but the prisoner at the bar could not be that man, because at the material time Beck was in South America. The defence strategy did not convince the jurors, who issued a guilty verdict: as a consequence, the Norwegian businessman was sentenced to seven years of penal servitude. Beck was sent to Chelmsford Prison and ultimately to Portland: in both penitentiaries he was treated as a repeat offender and previously convicted prisoner.

Beck did not appeal the decision simply because, in the late nineteenth century, a court of criminal appeal still did not exist in England[48]; the prisoner however did not give up hope and submitted several petitions to the competent authorities. In May 1898 Mr. Dutton – Beck's solicitor – asked for a re-opening of the case. The resulting investigation brought to light a very relevant circumstance: in 1879 John Smith had been examined by the prison director, who had reported that the prisoner had been circumcised, while Beck was not. The only consequence of this important discovery was that Beck was given a new identification number[49]. The Norwegian businessman continued to petition until July 1901, when he was released on good behaviour.

[47] See, for instance, the testimonies given by Evelyn Emily Miller and Minnie Lewis on the first day of the trial (3 March 1896). Testimony of Evelyn Emily Miller: «At the beginning of February this year the police came to me. I went to Westminster Police Court and saw the prisoner with a number of other men in the Court Yard, and identified him at once without difficulty». Testimony of Minnie Lewis: «In January or February the police came to me, and I went to Westminster Police Court, where from about fourteen men I picked out the prisoner. I have not a shadow of a doubt he is the man». E. R. Watson, *Adolf Beck*, cit., pp. 123-130.

[48] At that time, a case could only be referred to the Court for Crown Cases Reserved (C.C.C.R.), which had been established in 1848. The jurisdiction of this court, however, was confined to points of law: this meant that the prisoners could not appeal on the facts of the case. On the creation and functioning of the C.C.C.R.: P. Handler, *The Court for Crown Cases Reserved, 1848-1908*, in «Law and History Review», 29, 1 (2011), pp. 259-288.

[49] From the Home Office Minutes (May and June 1898): «I believe Mr. Dutton is so far right that Beck and Smith are different persons, which is shown by the marks on them [...] but this does not prove that Beck was not guilty of the many offences of the same kind of which he

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Nearly three years after he had been released, Beck was charged with larceny of jewellery and put into custody again. A new trial was held at the Central Criminal Court on 27 June 1904. The script repeated itself: a number of eyewitnesses were examined by the prosecution and re-examined by the defence before the jurors found a verdict of guilty. The trial however did not end like the previous one, because the judge – Mr. Justice Grantham – decided to postpone the sentence in order to make some inquiries. Ten days later a man who called himself William Thomas was arrested in the act of pawning certain rings obtained from two women by false pretences. In a very short time, the police realized that William Thomas was an alias for John Smith: after more than eight years, the assumption that Adolf Beck and John Smith were the same person was finally disproved. As a consequence, Beck was given a free pardon in respect of both the 1896 and 1904 convictions, whereas William Thomas, alias John Smith, was sentenced to five years of penal servitude[50].

The fact that an innocent man had been twice convicted created serious misgivings in public opinion about the administration and functioning of the criminal justice system. Hence a commission of inquiry was established to shed light on the whole affair: the committee re-examined all the circumstances of the case in order to discover «the cause, not only of the original miscarriage at the first trial, but also of the subsequent failure of the reviewing authority to detect the flaw and redress the wrong»[51]. To achieve this purpose, the commission submitted to careful scrutiny the performance of the prison institutions, the police, the public prosecutor and, lastly, the Home Office. As the committee pointed out, the authorities involved in this case had given more importance to eyewitness testimonies rather than «physical identification marks», ignoring the fact that «evidence as to identity based on personal impressions, however *bona fide*, is perhaps of all classes of evidence the least to be relied upon and therefore, unless supported by other facts, an unsafe basis for the verdict of a jury»[52]. The committee noted that «the introduction of the finger-print system has now placed at the disposal of the authorities a means of identification which is certainly more satisfactory, and is alleged to be conclusive»[53]. The competent authorities, therefore, should have relied on objective criteria to ascertain the

was convicted, he having been satisfactorily identified by numerous women whom he had defrauded». R. Watson, *Adolf Beck*, cit., p. 203.

[50] *Ibid*, pp. 112-114.

[51] *Committee of Inquiry into the case of Mr. Adolf Beck. Report from the Committee together with minutes of evidence, appendix and facsimiles of various documents*, London 1904, p. VII.

[52] *Ibid.*

[53] *Ibid*, p. XI.

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identity or non-identity of the person subjected to trial: fingerprint technology could undoubtedly be very effective in this matter.

As easily understood, the case and subsequent inquiry attracted the attention of the newspapers. The Norwegian press also provided information to its readers, who were thus made aware of the wrongful conviction suffered by their compatriot. On 17 August 1904 a photo of Adolf Beck was published on the front page of the *Ukens Nytt*: the caption under the photo explained that Beck had been convicted due to a fatal resemblance to another man, who was eventually identified and arrested[54]. A few days later, the *Romstdals Amtstidende* published a long article significantly entitled *En Engelsk Dreyfus sag* [*An English Dreyfus case*], thus proposing a parallelism between the story of Adolf Beck and the famous Dreyfus affair[55]. For his part, the Norwegian businessman expressed the hope that his suffering could provide the basis for an improvement of the English legal system[56].

The Beck case, indeed, led to an important reform, i.e. the creation of the court of criminal appeal, which was established by the Criminal Appeal Act approved in 1907[57]. Furthermore, the case had demonstrated that identification evidence based on personal impressions required careful attention, given that they could be an unsafe basis for convictions. The vicissitude of the Norwegian businessman, therefore, helped hasten the adoption of reliable techniques for ascertaining the identity of the suspects. Many decades later, the Director of the Federal Bureau of Investigation, John Edgar Hoover, wrote as follows: «[w]ithout a certain means to establish human identity, law enforcement performance

[54] *Ukens Nytt (Aftenpostens Ugeudgave)*, 17 August 1904.

[55] *Romsdals Amtstidende*, 24 August 1904.

[56] *Arbeidet*, 07 September 1904.

[57] According to Forster Boulton, the reform approved in 1907 «is probably the greatest change in English law and practice that this generation has seen». A. C. Forster Boulton, *Criminal appeals under the Criminal Appeal Act of 1907*, London 1908, p. VII. As Michael Naughton pointed out, the establishment of the Court of Criminal Appeal «was intended as creating an opportunity for innocent victims of miscarriages of justice to overturn their convictions». M. Naughton, *The innocent & the criminal justice system: a sociological analysis of miscarriages of justice*, Basingstoke 2013, p. 1. The scandalous story involving Adolf Beck undoubtedly had a fundamental role in the creation of the Court of Criminal Appeal, which however had been the subject of debates and proposals for many years. The Criminal Appeal Act of 1907, therefore, was not «the mere expression of a passing whim». L. B. Orfield, *History of Criminal Appeal in England*, in «Missouri Law Review», 1 (1936), p. 337. For further investigation on this topic: C. Passarella, *Can you "with safe conscience" say that these women are guilty? Adelaide Bartlett, Florence Maybrick and the reparation of judicial errors on the threshold of the twentieth century*, in «Historia et Ius», 21 (2022), pp. 1-33.

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would at best be slipshod and at worst cause grievous injustices to innocent citizens»[58]. The Beck case was and still is absolutely emblematic in this regard.

4. *Overcoming reluctance and scepticism: the Stratton brothers' case*

If the trial of Adolf Beck was destined to become one of the most extraordinary examples of mistaken identity in the history of English criminal justice, the Stratton brothers' case achieved notoriety as the first murder trial in which a fingerprint was used as decisive evidence. In the trial against Alfred and Albert Stratton, several people were called to testify before the Central Criminal Court, but in the end the conclusive proof turned out to be a fingerprint which was found by the police at the crime scene. As we are going to see, this fingerprint was examined by Inspector Charles Collins, whose testimony would prove crucial to the success of the prosecution[59].

The fact took place in the early morning of 27 March 1905 in a paint shop in Deptford. That morning the shop assistant, William Jones, arrived at the store a little after 08.30. Since he was unable to get in through the main door, he went to Mr. Chapman's Greenwich shop to ask for someone's help; then he came back with Mr. Chapman's assistant, Louis Kidman. They decided to enter by the back door: just after stepping inside, they saw the shop manager, Thomas Farrow, «lying dead in the parlour»[60]. The police being informed, the two assistants waited there until Sergeant Atkinson arrived. Thereupon they went upstairs where they also found Mrs. Farrow «severely injured and apparently dead»[61]. The woman was sent to the hospital, but medical treatment was in vain[62].

[58] J. E. Hoover, *The Role of Identification in Law Enforcement*: *An Historical Adventure*, in «St. John's Law Review», 46, 4 (1972), p. 631.

[59] *Proceedings of the Central Criminal Court, May 1905*, pp. 978-1010. The record of the proceeding is available online at: https://www.oldbaileyonline.org/record/t19050502-415 (consulted on 29 January 2024). On this famous case: J. Thorwald, *The Century of the Detective*, cit., pp. 76-81 and A. M. Joseph, *Anthropometry, the Police Expert, and the Deptford Murders: The Contested Introduction of Fingerprinting for the Identification of Criminals in Late Victorian and Edwardian Britain*, in J. Caplan - J. Torpey (eds.), *Documenting Individual Identity. The Development of State Practices in the Modern World*, Princeton and Oxford 2001, pp. 164-183. See also C. Beavan, *Impronte digitali*, cit., pp. 163-180.

[60] Testimony of William Jones: *Ibid*, p. 979.

[61] Testimony of Louis Kidman: *Ibid.*

[62] When she was found, Mrs Farrow «was almost unconscious, suffering from shock and severely injured in her head». She died on Friday 31st March. Testimony of Dudley Burnie, Divisional surgeon of police: *Ibid*, p. 980.

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Without wasting time, Sergeant Atkinson carried out an inspection of the crime scene: on the ground floor he found two masks made from stockings – «one with string at each side and one without» – whereas in the bedroom on the first floor he saw an empty cash box lying on the ground[63]. The box was handled by Sergeant Crutchett who used the utmost attention in collecting the evidence: he «took two pieces of paper and removed the box by the corners» with the paper between his fingers and the box to avoid leaving any prints. No one touched the box until 11.30, when Assistant Commissioner Macnaghten and Chief Inspector Fox arrived and took charge of it[64].

A few days later the divisional surgeon of police made a *post mortem* examination on the body of Mr. Farrow. The autopsy showed that his death was due to «shock and haemorrhage» as direct result of the injuries inflicted on the deceased[65]. According to the surgeon, the victim might have lived two or three hours after having received the injuries: this meant that the assault had occurred in the very early morning.

The police immediately began taking statements from potential witnesses. Investigations revealed that a milkman and his boy had noticed two men leaving the shop approximately around 07.15. The witnesses provided a description of the two men: one was «a little bit taller than the other and was dressed in a dark blue serge suit», the other one «was dressed in a dark brown suit, a cap and a pair of brown boots»[66]. Other witnesses claimed to have seen Alfred and Albert Stratton in the neighbourhood of the shop the night the crime was committed. Henry John Littlefield, a professional boxer, stated that that night, around 02.30, he saw the brothers at the Broadway Theatre: Alfred had on a brown suit, while Albert was dressed in a dark blue serge suit. During the time the boxer was speaking with them, Alfred was looking «up and down the street», whereas Albert «seemed to be fumbling with his coat as if he had something in it». As stated by the witness, after a brief exchange of words, the brothers took their leave and headed towards Farrow's shop[67]. Another testimony was given by Ellen Stanton, who lived at the back of the Broadway Theatre. She said that on the early morning of 27 March she was going to take the train to go to work as usual. At 07.15 she saw two men running into New Cross Road: Ellen

[63] Testimony of Sergeant Albert Atkinson: *Ibid*, pp. 979-980.

[64] Testimony of Sergeant Alfred Crutchett, read by Frederick Fox: *Ibid*, pp. 981-982.

[65] Testimony of Dudley Burnie: *Ibid*, p. 980.

[66] Testimony of Edward Alfred Russell (the milkman's boy): *Ibid*, p. 997.

[67] Testimony of Henry John Littlefield: *Ibid*, pp. 998-999.

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recognised one of the men as Alfred Stratton, who was dressed in «a dark brown suit and dark cap»[68].

On the basis of these testimonies, a few days later the police arrested both brothers. Shortly afterwards, the milkman ad his boy were summoned to make an identification of the suspects: looking at the prisoners, the witnesses were not able to say whether those were the men they saw leaving the shop on the early morning of 27 March[69]. Although the identification was a failure, the two brothers were «indicted for and charged on the Coroner's inquisition with the wilful murder of Thomas Farrow»: the trial took place on 5th and 6th May at the Old Bailey before Mr. Justice Channell.

At the trial, one of the most important witnesses was Hannah Mary Cromarty[70]. Hannah had been living with Alfred for about twelve months: they had moved to Deptford a few weeks before the crime was committed. The night between 26 and 27 March Hannah and Alfred had a violent quarrel in which she suffered a black eye. The quarrel was heard by the neighbours, who came into the room and spent a little time with Hannah, whereas Alfred went out. When he came back – around midnight – the neighbours left the room, then Alfred and Hannah went to sleep. Shortly after, someone knocked on the window: Alfred got up and said to the person outside the room «Shall we go out tonight, or leave it for another night?». Hannah did not hear whether there was any reply, because she laid down again and took no more notice about it.

When the following morning she woke up at 09.15, Alfred was at the bedroom door dressed in a blue coat and brown boots. As the woman pointed out, Alfred also had a brown coat which was usually kept at the head of the bed. After the crime was committed, Hannah noticed that the jacket was no longer there: asked for an explanation, Alfred said he had given it away «to some poor fellow who wanted one»[71]. The whole matter made Hannah suspicious. Her suspicions grew further when Alfred asked her to provide him with an alibi. The days following the crime – Hannah did not remember the precise day – he

[68] Testimony of Ellen Stanton: *Ibid*, pp. 999-1000.

[69] Testimony of Edward Alfred Russell (the milkman's boy): «[...] on April 3rd I went to the police station and saw a number of men standing in a row – I was not able to pick out from them anybody whom I had seen on the Monday morning». *Ibid*, p. 997. Testimony of Henry Alfred Jennings (the milkman): «[...] on April 3rd I went to Blackheath Road police station and saw a number of men in a row – I was asked if I saw amongst them the men I had seen on the Monday morning, but I failed to identify – looking at the prisoners now, I am unable to say one way or the other whether those are the men I saw in High Street, Deptford». *Ibid*, p. 998.

[70] Testimony of Hannah Mary Cromarty: *Ibid*, pp. 989-994.

[71] *Ibid*, p. 991.

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said: «If anybody asks you where I was on the Sunday night and Monday morning, say I was in bed with you, and I went to get some work at Braby's at 09.15 and came back at 10». At first, the woman provided such a version, afterwards, however, she decided to tell the truth[72].

The testimony of Hannah Mary Cromarty and those of other witnesses brought to light a number of circumstantial evidence against the prisoners, but not sufficient to meet the standard of proof required for a criminal conviction[73]. That's the time when fingerprint technology came into play. The police, indeed, had found a fingerprint on the inner tray of the cash box which was recovered from the crime scene. This evidence was examined by Detective Inspector Collins, the same officer who had testified as an expert witness in the trial of Harry Jackson in September 1902. Collins had been working in the Fingerprint Department since the formation of the Fingerprint Bureau in 1901. Prior to that, he had been employed on the anthropometric system: Inspector Collins, therefore, had personally experienced the transition from anthropometry to dactyloscopy[74]. As we are going to see, the Chief of the Fingerprint Department turned out to be the right person in the right place at the right time.

As explained to the court, Collins had photographed the fingerprint found at the crime scene «for the purpose of comparing it with others», but, until the prisoners' arrest, he had not been able to find any match. A turning point came when the two brothers were put in custody: after taking their fingerprints, Collins found that Alfred's right thumb corresponded with the mark on the cash box. The prints matched in eleven characteristics that the Inspector indicated to the court «by red lines and figures». Although there was no full correspondence, Collins had no doubts: the fingerprint at the crime scene belonged to Alfred Stratton. To support this thesis, the Inspector mentioned the studies

[72] Re-examined, Hannah said: «Chief Inspector Fox put the questions to me and said if I did not speak the truth I should be put into a cell or taken away somewhere – I have spoken the truth – I went to the station with the tale that Alfred slept with me all that night and never went out – the Inspector said, "It is no good your saying that because he was seen out" – then I spoke the truth as far as I could remember it». *Ibid*, p. 994.

[73] Essential bibliographical references on the history of law of evidence in criminal trials are B. Shapiro, *'Beyond reasonable doubt' and 'probable cause'. Historical perspectives on the Anglo-American law of evidence*, Berkeley 1991 and J. Q. Whitman, *The origin of reasonable doubt: theological roots of the criminal trial*, New Haven 2008.

[74] Testimony of Charles Collins: «I have been employed in connection with the Finger Print Department since the formation of the finger print system in 1901 – previous to that I was employed for two or three years on the anthropometric system, which was a system based on certain body measurements [...] At Scotland Yard we have now between 80,000 and 90,000 sets of fingerprints, which means between 800,000 and 900,000 impressions of digits». *Proceedings of the Central Criminal Court, May 1905*, p. 1001.

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carried out up to that point: such studies revealed that the highest number of correspondences between prints of two different fingers was three[75]. That being so, it was impossible that the print on the cash box belonged to someone other than the prisoner at the bar.

As Collins pointed out, there were a number of reasons why two prints of the same finger could not totally agree. One of the most relevant factors was the pressure applied at the time of the measurement, which could alter the shape of the mark, thus leading to a misleading result. Such an explanation, however, was not enough to convince the jurors who were unfamiliar with this kind of evidence. In order to overcome their reluctance and scepticism, Collins devised a simple but effective experiment. He took two impressions of one of the jurors' thumb, «one heavy and the other light»: due to the different pressure applied during the experiment, the finger prints did not appear in all respects identical, although they belonged to the same person[76].

The testimony given by Collins turned out to be the prosecution's ace in the hole: after two hours in the jury room, indeed, the jurors found both Alfred and Albert Stratton guilty of murder. On the basis of this verdict, the two brothers were sentenced to be hanged until death. In the following days many newspapers commented on the sentence, given the right prominence to the role played by Inspector Collins and his skilled testimony about the new identification method[77]. On 12 May 1905 the *Melton Mowbray Times and Vale of Belvoir Gazette* explained to its readers that the fingerprint system had gained the right to be considered «the criminal's deadliest enemy»[78]. The fingerprint found at the crime scene, in fact, had proved to be the decisive evidence against the two brothers, who were promptly executed under the walls of Wandsworth prison[79].

[75] In 1920 Scotland Yard established that there must be at least 16 correspondences between the prints found at the crime scene and those of the accused: under the new rule, the number of correspondences found in the Stratton case would not have been enough to link the defendant with the crime. C. Beavan, *Impronte digitali*, cit., p. 182.

[76] *Proceedings of the Central Criminal Court, May 1905*, p. 1004.

[77] See in particular the special edition published by *The People* the day after the conclusion of the trial. *The People*, 07 May 1905: *Deptford Mask Murders. Special Sunday Edition*.

[78] *Melton Mowbray Times and Vale of Belvoir Gazette*, 12 May 1905: *How finger-marks convict criminals. System which helped to convict the "masked" murderers on Saturday*.

[79] The news of the execution, which took place on Tuesday 23 May 1905, was reported by many newspapers. See for instance: *Manchester Evening News*, 23 May 1905: *Double execution* and *Daily News*, 24 May 1905: *Brothers on the scaffold*.

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5. *Anders Daae, the Norwegian pioneer of fingerprint identification*

One month later, on Tuesday 27 June 1905, a Norwegian newspaper published a short article dedicated to the Deptford murders under the title *En engelsk dødsdom* [*An English death sentence*]. The reporter briefly described the story by focusing the attention on the most important evidence for the prosecution, that is the fingerprint found at the crime scene. The journalist wrote as follows:

> The most dangerous evidence against the accused was a fingerprint found on the cash box; this print fit the eldest of the brothers' thumb. Such a fingerprint is considered by experts as an almost infallible testimony. It is claimed that among the fingerprints of many thousands of different persons, no two are exactly alike[80].

Then the reporter focused on the final moments of the trial, when the jury returned to the courtroom with its verdict. After hearing the jurors' response, the Chief Justice asked the prisoners if they had anything to say before the delivery of the judgment: neither Alfred nor Albert made any requests or comments. Thus the judge sentenced both the brothers to death without any hope of obtaining pardon; upon hearing these words, the prisoners' eyes betrayed desperation and resignation. As we already know, the sentence was promptly carried out.

Going beyond the specific case, the article noted that in a few years the Criminal Investigation Department had collected thousands of fingerprints to be used in criminal trials. If Scotland Yard was working at full capacity, in Norway, by contrast, fingerprint technology was still in its infancy. Actually, the years between the nineteenth and twentieth centuries had been a period of important reforms for the Nordic country, especially in the field of criminal law and procedure: one need only consider the Criminal Procedure Act (*Straffeprocesloven*) approved in July 1887[81] and the new penal code (*Straffeloven*) enacted in

[80] «Det farligste vidnesbyrd mod de anflagede var et fingertryk, som fandtes paa pengeskuffen; dette aftryk passede paa den ældste af brødrenes tommelfinger. Et saadant fingertryk anses af sagkyndige som et næsten usvigelig vidnesbyrd. Det paastaaes, at blandt fingeraftryk af mange tusen forskyellige personer findes der ikke to, som er aldeles lige». *Glommendalen*, 27 June 1905, *En engelsk dødsdom*.

[81] B. Getz - F. Hagerup, *Straffeprocesloven*, Kristiania 1890. As written by Maria Astrup Hjort, «[t]he Norwegian Criminal Procedural Act succeeded probably due to the political desire to introduce the jury system». M. A. Hjort, *Sources of Inspiration of Nordic Procedural Law: Choices and Objectives of the Legal Reforms*, in L. Ervo - P. Letto-Vanamo - A. Nylund (eds.), *Rethinking Nordic Courts*, Cham 2021, p. 71. The Norwegian reform drawn the attention of jurists coming from other countries. In Italy, for instance, Emilio Brusa – professor of law and criminal procedure at the University of Turin – decided to translate the law into Italian and published it preceded by a long and laudatory essay: E. Brusa, *Codice di procedura penale norvegese (1 luglio*

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May 1902[82]. In this reformative context, the establishment of a bureau responsible for the identification of the criminals was being discussed. At that time, however, the Norwegian literature on the matter was lacking: one of the few to have studied the methods to be used for detecting criminals was Anders Daae, who today is considered the pioneer of fingerprint identification in the country.

Anders Daae was born in Bergen in April 1838[83]. After concluding his medical studies at the age of 23, he began to practice the profession in Kragerø, a small coastal town in Southern Norway. Daae worked as doctor in Kragerø from 1864 to 1887, when he was appointed Chief Inspector of Trondheim Penitentiary. Shortly after arriving in Trondheim, he was named prison director and became co-editor of the *Nordisk Tidsskrift for Fængselsvæsen* [*Nordic Journal of Prison Service*][84]. Finally, in 1892, he was appointed prison director of Botsfengselet in Kristiania, a position he would hold until his death, in December 1910.

While in Trondheim, Daae began his research on the methods for criminal identification according to the Bertillon system. In the following years, the prison director continued his research at home and abroad thanks to a series of scholarships, which allowed him to visit many European countries. From May to June 1892, Daae visited Sweden, Germany and England in order to familiarize with their correctional institutions; from February to April 1899, he was in Paris to participate in a training course on the identification technique better known as «portrait parlé»; in June and July 1900, he visited England again and travelled to Denmark, Switzerland and Belgium to become acquainted with their penitentiary institutes[85].

The experience gained during these years of intense study resulted in the publication of an essay written by Daae in collaboration with the Danish police inspector Henrik Madsen. As the title suggested – *Anthropometriske Signalementer*

1887), Torino 1900. A comparative study between the Italian system and the Norwegian procedure at the dawn of the twentieth century has been carried out by C. Passarella, *La legge di procedura penale norvegese (1887): una fonte di ispirazione per l'Italia? Traduzione note e ragionamento di Emilio Brusa (1900)*, in «Rivista di Storia del Diritto Italiano», 1 (2023), pp. 79-116.

[82] On the criminal code approved in 1902 see: S. Flaatten - G. Heivoll (eds.), *Straff, lov, historie: historiske perspektiver på straffeloven av 1902 [Punishment, law, history: Historical perspectives on the penal code of 1902]*, Oslo 2014. For an in-depth analysis on the Norwegian criminal code from the nineteenth century to the present day: J. Jacobsen - V. Hallgren Sandvik, *An Outline of the New Norwegian Criminal Code*, in «Bergen Journal of Criminal Law and Criminal Justice», 3, 2 (2015), pp. 162-183.

[83] *Norges læger 1800-1908*, cit., p. 228.

[84] *Salmonsens Konversationsleksikon*, V, København 1916, p. 405.

[85] *Norsk biografisk leksikon*, cit., p. 168.

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efter M. Alphonse Bertillon (1900) – the book focused on the anthropometric system, in which the Norwegian doctor had great confidence[86].

In the introduction the authors explained the principles on which anthropometric measurements were based: firstly, the almost absolute immutability of the skeleton after 20 years of age; secondly, the remarkable divergence in the interrelations of the skeletal parts in different people; thirdly and lastly, the ease and accuracy with which certain parts of the human skeleton can be measured with fairly simple instruments[87]. Immediately afterwards, the authors drew up a series of general rules (*almindelige regler*) that had to be respected by the operators responsible for taking the measurements. It was first of all essential to become familiar with the procedure by practicing on prisoners or colleagues, in order to acquire the necessary ability to work quickly without making mistakes. The officers also needed a suitable room with the right equipment, which included a panel to measure the person's height, a stool to calculate the seat height, and a calliper to take the measurements of the head circumference. Besides that, the operators were required to use other instruments to measure the length of ears, limbs and feet[88].

The anthropometric measurements – which must be taken with extreme meticulousness – were reported in the identification note (*signalementskort*) along with other personal details. As explained by the authors in the second part of their essay, the front-page of the identification note provided the following information: anthropometric measurements; front and profile photos; colour of skin, hair and eyes; fingerprints of the right hand, with the exception of the little finger; age; place of birth; date and name of the officer who filled out the form[89]. All this information was essential to carry out a correct identification, thus avoiding the risk of mistaken identity. The attached front and profile photographs served exactly this purpose, but the equipment to take pictures was not always available: in such a case, the *signalementskort* must include a detailed description of the person's appearance[90]. If the photos were not strictly

[86] A. Daae-H. Madsen, *Anthropometriske Signalement*er, Kjøbenhavn 1900.

[87] «1. Skelettets næsten absolute Uforanderlighed efter 20de Aar [...] 2. Den overordentlige Forskjel i Skeletdelenes indbyrdes Forhold hos de forskjellige Mennesker [...] 3. Den Lethed og Nøiagtighed, hvormed enkelte Dele af det levende Menneskes Skelet kan maales med ganske simple Instrumenter [...]». *Ibid*, p. 1.

[88] *Ibid*, pp. 5-31.

[89] *Ibid*, pp. 32.

[90] A distinction was therefore made between «Anthropometrisk Signalement med fotografisk Billede og Fingeraftryk» (anthropometric description with photographic pictures and fingerprints) and «Anthropometrisk Signalement med Beskrivelse og Fingeraftryk» (anthropometric description with description and fingerprints). *Ibid*, pp. 33-35.

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indispensable, fingerprints, by contrast, could not be omitted, since they represented a fundamental element in criminal identification. The procedure for taking fingerprints was described in a few simple words:

> After the fingers of the person's right hand have been well dried, take its fingers individually, thumb first, lightly roll the anterior surface of the outermost phalanx on the blackened plate and roll it again on the part of the identification note which is intended for this print. Do the same with each finger of the hand, except for the little finger, one after the other, so that the prints appear in the space designed for each of them on the identification note[91].

It is significant that the authors decided to include this short but meaningful passage in an essay which was otherwise entirely dedicated to anthropometric measurement: the reference to the new method, indeed, reveals a nascent interest in a technique that would play a key role in the future. At that time, however, the country still did not have a bureau responsible for criminal identification activities equipped with fingerprint records. Such a database was created a few years later, in 1906, with the establishment of the *Signalementskontor* in Oslo. The creation of the Identification Bureau was the result of the work carried out by Daae, who, in 1905, had organised a training course on the methods for identifying criminals, including fingerprinting techniques. However, the idea of creating a dedicated office came from the Chief of the Oslo Police Department, Jelstrup, who worked hard to find a suitable location for the new office[92]. The first director of the bureau was Waldemar Hansen who, before taking up the position, had travelled to England to study the fingerprint system used at Scotland Yard[93].

Meanwhile, Daae continued his studies on the anthropometric system which, at the dawn of the new century, was used to classify the entire

[91] «Efter at Personens Fingre paa høyre Haand er bleven godt tørrede, saa tag hans Fingre enkeltvis, først Tommelfingeren, rul Forfladen af dens yderste Falanx let paa den sværtede Plade og rul den igjen paa den Del af Signalementskortet, som er bestemt for dens Aftryk. Gjør det samme med hver af Haandens øvrige Fingre undtagen Lillefingeren, den ene efter den anden, saa deres Aftryk kommer paa den for hver af dem bestemte Plads paa Signalementskortet». *Ibid*, p. 38.

[92] In its early years, the office was located on the top floor of the prison building in Oslo. H. J. Birkelund, *Kortfattet veiledning i fingeravtrykk samt litt av fingeravtrykkenes og identifiseringens historie* [*Brief guidance on fingerprints as well as a bit of the history of fingerprint and identification*], Oslo 1932, pp. 39-40.

[93] J. Jørgensen, *Politiliv. Politihistoriske riss og skisser gjennom 260 år* [*Police life. Historical police drawings and sketches over 260 years*], Oslo 2004, p. 62.

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Norwegian population[94]; at the same time, the prison director was turning his attention to the fingerprint technology and its application in criminal identification. This research resulted in a new essay published in 1907, whose title – *Fingeraftryk Signalementer* [*Fingerprint descriptions*] – immediately revealed a notable change in perspective from anthropometry to dactyloscopy[95].

Significantly, the first page of the book showed a photograph of the newly established *Signalementskontor*, where two officers were examining a number of identification sheets by using the right equipment, including a magnifying glass, essential for fingerprint analysis. Daae paid great attention to the description of the instruments to be used in taking fingerprints: in addition to the magnifying glass, the outfit included a metal plate, a small roller, a tube of ink, two paperweights, reading glasses and a pointer stick[96]. After their use, both the metal plate and the roller had to be cleaned with turpentine or gasoline, and stored in the appropriate box to protect them from dust and moisture. As specified by the author, if the roller was not regularly used, before putting it away, it should be greased with olive oil to avoid its hardening[97]. Nothing should be left to chance, so as not to run the risk of compromising the results of the procedure.

As obvious, the equipment could not fail to include the fingerprint card (*fingeraftrykskort*) which was composed by two sections with different characteristics: the former was divided into ten spaces, one for each finger print, whereas the latter was used for the simultaneous collection of four finger prints of each hand, from index finger to little finger. The practice of detecting four fingers simultaneously responded to a specific purpose, that is to see in a single glance the ridge patterns of the skin, thus facilitating their comparison and evaluation. The procedure required a high level of precision in every single step, particularly in the detection phase, when the fingers had to be pressed «firmly but gently» onto the paper to prevent smudges or other imperfections[98].

[94] See A. Daae – H. Daae, *Indlands og kystbefolkningens legemshøide, favnevidde, brystomfang og siddehøide [Body height, arm width, chest circumference and sitting height of the inland and coastal population]*, Christiania 1905. The connection between anthropometric measurements and racial classification has been investigated by the exhibition *FOLK – From racial types to DNA sequences,* which was held at the Norsk Teknisk Museum (Norwegian Museum of Science and Technology) from March 2018 to December 2019. More information at https://folk.tekniskmuseum.no/en/ (consulted on 08 February 2024).

[95] A. Daae, *Fingeraftryk Signalementer*, Kristiania 1907.

[96] A 'detective toolkit' (*sporsikringsskrin*) belongs to the collection of objects exhibited at the Museum of Justice in Trondheim. See: https://digitaltmuseum.no/021026364282/sporsikringsskrin (consulted on 08 February 2024).

[97] A. Daae, *Fingeraftryk Signalementer*, cit., p. 14.

[98] Compared to the explanation proposed in the previous book, here the procedure for taking

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If the procedure for taking fingerprints deserved a high level of analysis, it was even more important to develop an effective and efficient classification system. Although inspired by the *modus operandi* devised by other scholars, Daae created his own method, which would go down in history as the «Daae system». The method devised by the Norwegian doctor put great emphasis on the index finger (*pekefingeren*), whose imprint was more elaborate and richer in details than that of the other fingers[99]. The distribution of the patterns on the index finger was the criterion according to which the identification sheets were organised in the archive[100]. The documentation was kept in special file cabinets equipped with a total of 90 drawers, each marked with a label indicating their content. As shown in the photo provided by the author, these cabinets were a fundamental part of the office equipment since its establishment in 1906[101].

As said, *Fingeraftryk Signalementer* was published in 1907, that is seven years after the publication of *Anthropometriske Signalementer*. In a very short time, therefore, fingerprint technique had made important progress, without however replacing the anthropometric system, which continued to be used by the Norwegian police[102]: soon, though, the new technology would establish itself as one of the most efficient and reliable method for criminal identification activities.

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fingerprints (*Fremgangsmaaden ved Fremstilling af Fingeraftryk*) was described with much more details. *Ibid*, pp. 11-14.

[99] H. J. Birkelund, *Kortfattet veiledning i fingeravtrykk*, cit., p. 39.

[100] Daae's classification system drawn the attention of scholars from other countries. By way of example, the Italian criminologist Salvatore Ottolenghi mentioned the method developed by Daae in his *Treatise on scientific police* published in 1910: S. Ottolenghi, *Trattato di polizia scientifica*, I, *Identificazione fisica applicata alla medicina e alle funzioni della polizia*, Milano 1910, p. 371. For further details on Salvatore Ottolenghi and his work: A. Giuliano, *Salvatore Ottolenghi: le impronte digitali in polizia scientifica e medicina legale*, Torino 2018; N. Labanca - M. Di Giorgio (eds.), *Salvatore Ottolenghi. Una cultura professionale per la polizia dell'Italia liberale e fascista. Antologia degli scritti (1883-1934)*, Milano 2018; E. Musumeci, *From criminal to enemy: the birth and development of the scientific police and criminal identification in Italy*, in «Revista Italo-Española de Derecho Procesal», 1 (2020), pp. 67-82; L. Garlati, *Alle origini della prova scientifica: la scuola di polizia di Salvatore Ottolenghi*, in «Revista Brasileira de Direito Processual Penal», 7, 2 (2021), pp. 883-934. We also find a reference to the system developed by Anders Daae in the book written by the German criminologist Robert Heindl (1883-1958): R. Heindl, *System und praxis der daktyloskopie und der sonstigen technischen methoden der kriminalpolizei*, Berlin and Leipzig 1922, 2 ed., pp. 224-225.

[101] One of the original file cabinets of the fingerprint archive has been preserved until the present days. See *Kartotekskap* at https://digitaltmuseum.no/0210211408361/kartotekskap (consulted on 15 February 2024).

[102] «For hver Person, af hvem der er istandbragt Fingeraftrykskort, udfærdiges osgaa et Bertillons portrait-parlé Kort eller i Mangel deraf et Kort, paa hvilket er noteret vedkommende Persons Navn, samt naar og hvor han er født». English translation: «For each person for

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6. *October 1910: the first success of the Identification Bureau*

The theoretical value of the system developed by Daae was put to the test of practice three years later, when the Identification Bureau was asked to identify the person responsible for a series of burglaries committed in the city of Oslo: this was the first occasion on which both Daae and Hansen had the opportunity to demonstrate the usefulness of fingerprinting in criminal identification.

The whole story was described by Hansen in his book *Litt om fingeravtryk [A little about fingerprints]*, which was published in 1925[103]. As explained by the author, in the spring of 1910 the Norwegian police was inquiring into some burglaries occurred in private houses in the Oslo area. Investigations began immediately; nevertheless, despite search efforts, no concrete clues or evidence were found. The turning point came in June when the police went to a farmhouse in Huitfeldts gate, in the town centre, to examine a new crime scene. The entire house had been vandalised: the drawers and the cupboards were empty and their content had been thrown chaotically on the floor. In the kitchen the police officers noted an opened juice bottle «with good fingerprints on it»: the examination carried out at the Identification Bureau revealed that the fingerprints belonged to a young man who had been convicted several times in the previous months. The suspect was arrested and put on trial before the Meddomsret, a tribunal consisting of one professional magistrate and two lay judges. In such a case, the decision to prosecute could appear a bit risky, because the only incriminating evidence against the accused was the fingerprint found at the crime scene; the choice, however, turned out to be successful and the defendant was sentenced to one year imprisonment[104].

The culprit did not give up hope and appealed the decision before the Lagmannsrett. The Lagmannsrett was a court composed by three professional judges and ten jurors, who were required to decide upon the innocence or guilt of the defendant[105]. In the appeal proceeding, therefore, the case would have

whom a fingerprint card has been prepared, it must be recorded also a Bertiillon's portrait-parlé or, in its absence, a card with the name of the person concerned, as well as when and where the person was born». A. Daae, *Fingeraftryk Signalementer*, cit., p. 32.

[103] W. Hansen, *Litt om fingeravtryk*, Oslo 1925, pp. 25-28. See also Id., *Fingeravtrykk og signalement*, cit., pp. 40-42.

[104] The sentence issued by the Meddomsret on 10 September 1910 attracted the attention of the newspapers. See for instance *Fredrikstad Tilskuer*, 10 September 1910: *Fingeravtryk som bevis* [Fingerprint as evidence].

[105] For more information on the proceeding before the Lagmannsrett: F. F. Melhuus, *The*

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been examined by persons who had no knowledge on criminal investigation methods: for this very reason, it was necessary to proceed with caution and accuracy. To achieve this purpose, the prosecution chose to rely on the expertise of Anders Daae and Waldemar Hansen.

On his part, Daae proposed a comparison between the fingerprint found on the juice bottle and that of the accused. In order to highlight the correspondences existing between the two prints, the prison director prepared a number of slides, which were displayed in the courtroom with the aid of a projector (*lysmaskin*). Daae examined the length and the direction of the patterns and analysed the characteristics of a scar in the loop of the middle finger. In his opinion, there could be no doubt: the fingerprint found at the crime scene in Huitfeldts gate belonged to the defendant[106].

The comparative analysis proposed by the prison director, however, was not enough to overcome the scepticism of the judges, who asked for a practical demonstration of the system's functionalities. The object lesson took place at the Identification Bureau, where Hansen was required to demonstrate how the classification system could be used to identify criminals. The Head of the office was asked to take the fingerprints of an inmate and find his information card in the register. The test was completed in a few minutes. Thereupon Hansen was asked for a further and more complicated demonstration. It was the same experiment as before with one important difference: the person whose fingerprints were taken was chosen randomly while Hansen was locked in another room. Back to the office, Hasen looked for the information sheet in the archive but in vain. He was then asked to examine other fingerprints and find the corresponding card: this final test was successful. Hansen later learned that the second set of fingerprints belonged to one of the jurors who, obviously, had never been fingerprinted, thus it had not been possible to find his identification note simply because it had never existed[107].

Law of Criminal Appeal of Norway, in J. H. Levy (ed.), *The Necessity for Criminal Appeal as Illustrated by the Maybrick Case and the Jurisprudence of Various Countries*, London 1899, pp. 562-596. As regards the trial by jury in Norway: A. Strandbakken, *Lay participation in Norway*, in «Revue Internationale de Droit Pénal», 72 (2001), pp. 225-251; A. Offit, *The Jury is Out: An Ethnographic Study of Lay Participation in the Norwegian Legal System*, in «Political and Legal Anthropology Review», 41, 2 (2018), pp. 231-246; Ead., *Dismissing the Jury: Mixed Courts and Lay Participation in Norway*, in S. Kutnjak Ivković et al. (eds), *Juries, Lay Judges and Mixed Courts: A Global Perspective*, Cambridge 2021, pp. 197-217.

[106] A. Daae, *Fingeraftryk som fældende bevismiddel* [*Fingerprints as incriminating evidence*], in «Nordisk Tidsskrift for Fængselsvæsen», 1910, pp. 176-184.

[107] W. Hansen, *Fingeravtrykk*, cit., p. 41.

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This episode is extremely significant because it denotes the reluctance of both the professional and the lay judges towards a system almost unknown in the country[108]. Daae and Hansen had managed to overcome this scepticism by demonstrating that criminal identification by fingerprints was not only possible but also (and above all) reliable. As happened five years earlier in the Stratton brothers' case, the theoretical value of the system had been put to the test and had not failed.

Once the experiment at the Identification Bureau was over, the jurors retired to deliberate. After half an hour in their room, they returned a guilty verdict; as a consequence, the court of appeal confirmed the first instance decision[109]. On the same day the sentence was issued, the journal *Morgenbladet* highlighted the great efficiency of dactyloscopy compared to the Bertillon system: the result of the trial was a great success for the Identification Bureau, especially considering that there was no other evidence against the accused, as the defence counsel tried to argue[110]. A few days later, the *Nordfjord* journal too published an article on the affair, by focusing the attention on the role played by experts' testimonies in this kind of situations[111]. There was indeed no doubt that both Anders Daae and Waldemar Hansen had played a key role in linking the crime with his perpetrator through forensic evidence. This trial – destined to be remembered for many years to come – represented the last great effort of the prison director

[108] It was on this occasion that the president of the court addressed to Hansen the words reported at the beginning of this article. See note n. 1.

[109] The sentence was passed on 14 October 1910. A hundred years later, Lovdata, the foundation which provides access to a collection of Norwegian legal sources, celebrated the anniversary of the case by making the judgment available on its website. The article *Fingeravtrykket fyller 100 år* [*Fingerprinting turns 100 years old*] can be read online on the following link: https://lovdata.no/artikkel/fingeravtrykket_fyller_100_ar/23 (consulted on 23 February 2024).

[110] *Morgenbladet*, 14 October 1910: *De forrædersk*e *fingeravtryk* [The treacherous fingerprints].

[111] *Nordfjord*, 18 October 1910: *De skjæbnesvangre fingeravtryk* [The fateful fingerprints].

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who died two months later from arteriosclerosis[112], whereas Hansen continued his work at the Identification Bureau until 1927[113].

7. *August 1926: the murder of two county police officers*

Although the trial of 1910 had bought fingerprint system to the fore, the other methods of identification were not set aside. The Norwegian police, indeed, continued to use both anthropometry and photography in order to identify criminals, but investigations were slowed down due to the lack of qualified staff and suitable rooms. Despite these difficulties, the *Signalementskontor* (whose name in the meantime had been changed to *Identificeringscentralen*[114]) worked at full capacity: in just under two decades, the police collected and archived more than 22.000 anthropometric notes and 47.000 fingerprint cards, as well as thousands of photographs[115].

Within this framework, fingerprint technology gradually gained ground until it took on a central role in crime detection[116]. The greatest triumph of the Identification Bureau occurred a few years later when the *Identificeringscentralen* was required to investigate the murder of two county police officers (better known

[112] Daae's death was announced by *Dagbladet* journal on 20 December 1910. The article praised the work carried out by the prison director, in particular his research on the use of fingerprint in criminal identification: «Direktør Daae har dog særlig og med størst hæder knyttet sitt navn til fingeravtrykmetodens bruk ved identifikation av forbrydere. Det er Daae, som har bragt metoden til landet, og liketil de par siste dager, før han døde, syslet han med at forbedre metoden». English translation: «Director Daae has linked his name particularly and with great honour to the use of the fingerprint method in criminal identification. It is Daae who has introduced the method in the country and, even in the last couple of days before he died, he was busy improving the method».

[113] E. Engeset, *Praktisk fingeravtrykkslære [Practical fingerprinting]*, Oslo 1965, p. 22.

[114] J. Jørgensen, *Politiliv*, cit., p. 62.

[115] H. J. Birkelund, *Kortfattet veiledning i fingeravtrykk*, cit., p. 40.

[116] In the first half of the twentieth century, however, the interest in fingerprint analysis was not limited to criminal investigation. At that time, the study of fingerprints was strictly connected with race biology: this connection was based on the idea that «fingerprint patterns were genetically determined and could correlate with race, ethnicity, disease propensity, mental abilities and behavioural characteristics». J. Røyne Kyllingstad, *Measuring the Master Race. Physical Anthropology in Norway, 1890-1945*, Cambridge 2014, p. 103. In Norway the connection between fingerprinting and eugenics became evident through the work carried out by the biologist Kristine Bonnevie (1872-1948), who in 1924 used the collection of the Identification Bureau – 25.000 set of prints – as starting point of her research on heredity. S. A. Cole, *Suspect Identities*, cit., pp. 110-111. For more information on this subject see: A. Teicher, *Kristine Bonnevie's theories on the genetics of fingerprints, and their application in Germany*, in «Studies in History and Philosophy of Science», 92 (2022), pp. 162-176.

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as *lensmannsmordet*) which took place in the summer of 1926[117]. On Saturday 21 August 1926, the inhabitants of Hønefoss, a town not far from Oslo, heard a loud explosion coming from a grocery store: it soon became known that some thieves had broken into the store and blown up the safe, before going on the run. The county police officers John Solumsmoen and Oluf Aalde took part in the search for the fugitives, which began shortly after and continued the following day. On Sunday evening gunshots were heard in Vågårdsåsen near Hønefoss, however no one understood what was happening until the next day, when the police found Solumsmoen already dead and Aalde about to die[118].

The double murder immediately attracted the attention of the newspapers, which «appeared to compete in giving the most grotesque and shocking presentations» of the case[119]. As reported by the press, when he was found, Aalde was still conscious and able to provide information to the competent authorities: before he died, he managed to say that they had been attacked by two men who were equipped with firearms and cutting weapons. During the investigation, it was discovered that the offenders had burgled a nearby hunting lodge, which was subjected to a careful inspection. On the items taken from the lodge, the police found «good fingerprints» which were examined at the Identification Bureau. The comparison between the fingerprints found in the cabin near the crime scene and those stored in the archive gave a positive response: the fingerprints taken from the lodge belonged to Anton Emanuel Oskar Svensson, a Swedish man who, a few years earlier, had been imprisoned and fingerprinted in Kongsberg. On Saturday 28 August, Svensson's photo appeared on the front-page of many newspapers, including *Aftenposten*, who wrote as follows: «it

[117] On this famous murder case: F. Kiel Jacobsen, *Giftblandersker og lensmannsmordere fra kriminalitetens historie i Østfold* [*Lady poisoners and sheriff's murderers from the history of crime in Østfold*], Østfold 1990, pp. 157-161; E. Tangen, *800 år i Kongens tjeneste: Ringerikes lensmenn* [*800 years in the King's service: Ringerike's sheriffs*], Hønefoss 2002, pp. 143-164; P. Jørgen Ystehede, *Two Suspicious Persons. Norwegian Narratives and Images of a Police Murder Case, 1926-1950*, in «Media History», 20, 4 (2014), pp. 368-383.

[118] W. Hansen, *Fingeravtrykk*, cit., pp. 49-50. For further details: Chr. A. R. Christensen, *Det hendte igår [It happened yesterday]*, Oslo 1933, pp. 215-220.

[119] P. Jørgen Ystehede, *Two Suspicious Persons,* cit., p. 373. See, among many, *Aftenposten,* 24 August 1926: *Fryktelig morddrama i Norderhov søndag* [Terrible murder drama in Norderhov on Sunday]; *Morgenbladet*, 24 August 1926: *En lensmand dræpt og en anden dødelig saaret under forfølgelsen av to indbrudstyve* [A county police officer killed and another mortally wounded during the pursuit of two burglars]; *Arbeiderbladet*, 24 August 1926: *Et rystende morddrama. To skapsprengere har søndag eftermiddag under et voldsomt slagsmål dræpt lensmennene Solumsmoen og Aalde* [A shocking murder drama. Two burglars killed the county police officers Solumsmoen and Aalde during a violent fight on Sunday afternoon].

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is the first time in Norwegian criminal history that a murderer has been detected by fingerprints»[120].

After the identification, the police launched a large-scale chase which continued until October, when Svensson and his accomplice, Henning Sigurd Madsen, were tracked down in a forest in Østfold county. Madsen was captured, while Svensson escaped into the forest and committed suicide[121], thus marking the end of one of the most dramatic manhunts in the country's history[122]. A few months later, Madsen was put on trial at the Lagmannsrett in Drammen, a city located in Buskerud county: as was to be expected, the defendant was found guilty and sentenced to life imprisonment (in Norway, at that time, life imprisonment meant 16 years in prison)[123].

Soon becoming a *cause célèbre*, the murder of the two county police officers also acquired notoriety in literature and cinema[124]. Although important for a number of different reasons, in the perspective here explored, the case must be remembered for the role played by fingerprints in criminal investigation, twenty years after the establishment of the Identification Bureau and the publication of the essay written by Anders Daae. If the case of 1910 was the first success achieved by the *Signalementskontor*, the double murder of 1926 undoubtedly represented its «greatest triumph»[125].

The following year, Hansen resigned from the police. In his farewell interview, he highlighted the progress made by the Identification Bureau under his supervision: after years of intense work, the police could now rely on 50.000 fingerprints, which could be decisive in the fight against crime. He had no doubts: without fingerprints, it would have been impossible to find the

[120] «Det er første gang i norsk kriminalhistorie, at en morder opdages ved fingeravtryk». *Aftenposten*, 28 August 1926: *Lensmandsmordet opklares* [The sheriff's murder is solved].

[121] The event was immediately reported by the newspapers. See, for instance, *Østfold Arbeiderblad*, 25 October 1926: *Lensmannsmordets næst siste akt* [The penultimate act of the sheriff's murder].

[122] F. Kiel Jacobsen, *Giftblandersker og lensmannsmordere*, cit., p. 157.

[123] Chr. A. R. Christensen, *Det hendte igår*, cit., p. 219.

[124] In 1933 the Norwegian writer Gunnar Larsen published a crime novel based on this famous case: G. Larsen, *To mistenkelige personer [Two suspicious persons]*, Oslo 1933. Larsen's book was the basis of the film *To mistenkelige personer* directed by Tancred Ibsen (1949). Upon the release of the film, Madsen, who meanwhile had left prison, took legal action against the film-makers, claiming that the movie violated his right to privacy. The court proved him right and banned the film, which remained so until February 2007. P. Jørgen Ystehede, *Two Suspicious Persons,* cit., p. 370.

[125] *Hamar Stiftstidende*, 13 June 1936: *Forbryterens farligste fiende* [The criminal's most dangerous enemy].

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perpetrators of the sheriffs' murder or, at the very least, the investigation would have been significantly delayed[126].

8. *From scepticism to definitive consecration*

The case of the two county police officers contributed to a relevant change in perspective: the initial scepticism towards fingerprinting was now giving way to a trustful attitude, in the belief that the technique could play an essential role in solving crimes, as demonstrated by the trial of Johannes Theodor Jansen occurred three years later. In autumn 1930 Jansen was tried before the Lagmannsrett in Trondheim on charges of aggravated theft and personal injury. The offences had been committed in a private residence in Kongens gate in the city centre: at the crime scene the police had found a fingerprint, thanks to which it was possible to identify the culprit, who was found guilty and sentenced to three years and six months in prison[127].

In a scenario where fingerprinting was acquiring a vital importance, the police officers needed textbooks to learn and improve the technique. The need was promptly met by Hansen himself who, despite his retirement, continued to teach at the Police School. In 1932 the policeman published *Fingeravtrykk og signalement* [*Fingerprints and identification*] in order to educate the new generation on the difficult art of investigation[128]. The same year, Hansen's successor, H. J.

[126] *Fremtiden*, 10 March 1927: *De farlige fingeravtrykk* [The dangerous fingerprints].

[127] On 28 November 1930 the Norwegian newspaper *Adresseavisen* wrote as follows: «Ingen hadde sett mannen gå op trappene, og ingen hadde sett ham springe ned. Det blev et vanskelig problem for den detektiv som fikk til oppgave å få fatt på forbryteren. Han fant tilslutt på en glassbite fra vinduet et fingeravtrykk, og ved henvendelse til fingeravtrykkcentralen i Oslo fikk han opgitt hvem mannen var». English translation: «No one had seen the man go up the stairs, and no one had seen him run down. This was a difficult problem for the detective who had been entrusted with the task of capturing the criminal. He finally found a fingerprint on a piece of glass from the window and, contacting the fingerprint bureau in Oslo, he was told who the man was». *Adresseavisen,* 28 November 1930.

[128] In March 1932 Hansen was interviewed by a Norwegian newspaper who wrote as follows: Waldemar Hansen «er vel den mann her i landet som har gjort mest for å innarbeide fingeravtrykkene». English translation: Waldemar Hansen «is probably the man in this country who had done the most to integrate fingerprints». In order to explain the importance of fingerprinting in criminal detection, the interviewee mentioned the legal troubles suffered by Adolf Beck, whose conviction could have been avoided by using the new technique. *Oslo Aftenavis*, 7 March 1932. Hansen retired from teaching in 1935. Two years later, in March 1937, the Norwegian newspaper *Nationen* recalled his important role in developing fingerprint recognition technology: not without reason, the first director of the Identification Bureau was popularly known as 'mannen med fingeravtrykkene', that is 'the man with fingerprints'.

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Birkelund, published another important book whose title was *Kortfattet veiledning i fingeravtrykk* [*Brief guidance on fingerprints*]. Like his predecessor, Birkelund believed that the acquisition of a broad and exhaustive knowledge on the matter could not ignore a historical approach: as the author wrote in the preface, it is not enough to know that fingerprint has become a reliable method of identification, but we also need to be aware of the history and development of the technique over the last thirty years[129]. The same idea was expressed by the Head of the Oslo Criminal Police, Reidar Sveen, in his work *Om etterforsking av forbrytelser* [*On the investigation of crimes*] published in 1949. Here the author mentioned the British pioneers of fingerprint analysis, from William James Herschel to Edward Richard Henry, without forgetting Henry Faulds, who was the first who understood that a fingerprint found at the crime scene could be useful in the investigation of crimes[130].

It is well known how, over the course of the twentieth century, fingerprint technique became one of the most reliable forensic pieces of evidence in criminal trials in Norway as well as elsewhere. A single fingerprint found by the police at the crime scene could make the difference between innocence and guilt, even in the absence of other evidence against the accused. A prime example in this regard is the murder of Jane Anne Devaney – three years of age – which took place in Blackburn Hospital, Lancashire, in May 1948. The discovery of two prints left by the murderer on a bottle found at the crime scene marked the start of a «mass fingerprint test» destined to go down into the history of forensic medicine. In order to find the offender, Scotland Yard fingerprinted the entire male population present in the town when the crime was committed[131]. After weeks of hard work, the research bore fruit[132]: the fingerprints belonged to 22-year-old Peter Griffiths, who was arrested, tried and finally executed[133]. In an article published on 22 October 1948, the Norwegian

Nationen, 9 March 1937. Hansen died at the ripe old age of 92. *Morgenblade*, 8 November 1949.

[129] H. J. Birkelund, *Kortfattet veiledning i fingeravtrykk*, cit., preface. By the same author see also *Singnalementslæren [The doctrine of identification]*, Oslo 1933.

[130] Sveen wrote as follows: «Det var en engelsk vitenskapsmann i Japan, doktor Henry Faults, som først gjorde oppmerksom på at et fingeravtrykk som ble funnet på åstedet for en forbrytelse, kunne tjene til oppklaring av forbrytelsen». English translation: «It was an English scientist in Japan, doctor Henry Faulds, who first paid attention to the fact that a fingerprint found at the crime scene could serve to solve the crime». R. Sveen, *Om etterforsking av forbrytelser*, Oslo 1949, p. 115.

[131] As written by J. Thorwald, the choice to take fingerprints of the entire population represented a «historic decision». J. Thorwald, *The Century of the Detective*, cit., p. 110.

[132] *Manchester Evening News*, 2 September 1948: *Mass fingerprint test led to Blackburn arrest*.

[133] G. Godwin, *Trial of Peter Griffiths (The Blackburn Baby Murder)*, London 1950.

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newspaper *Østlands-Posten* praised the investigative work carried out by Scotland Yard, who, in a few months, had collected and examined more than 46.000 fingerprints[134].

The strategic importance assumed by fingerprinting throughout the twentieth century did not prevent a reflection on its reliability as a means of proof in criminal proceedings. The debate reached its climax a few years ago, when the myth of infallibility of fingerprint identification was put into question by a growing number of scholars, who suggest caution in this matter in order to avoid a miscarriage of justice[135]. As recent studies pointed out, no new technology in crime detection is infallible[136]: this means that, more than a century after the case of Adolf Beck at the Central Criminal Court, the risk of mistaken identity is still present in our societies.

[134] *Østlands-Posten*, 22 October 1948: *Sherlock Holmes i arbeid* [Sherlock Holmes at work]. For further details on the work carried out by Scotland Yard: C. Campbell, *The Blackburn Child-Murder. An account of the finger-print work undertaken in the investigation of the crime*, in «The Police Journal», 23, 2 (1950), pp. 102-111. Once the trial was over, the Chief Constable of Blackburn announced that the men who had been fingerprinted during the investigation could have their fingerprint cards on applying. In early November all unclaimed cards were destroyed: as obvious, the only one to be retained was that of Peter Griffiths. *The Yorkshire Post*, 4 November 1948: *46.500 fingerprint cards destroyed*.

[135] In this regard, see the studies carried out by S. A. Cole: Id., *More Than Zero: Accounting for Error in Latent Fingerprint Identification*, in «Journal of Criminal Law & Criminology», 95, 3 (2005), pp. 985-1078; Id., *Is Fingerprint Identification Valid? Rhetorics of Reliability in Fingerprint Proponents' Discourse*, in «Law & Policy», 28, 1 (2006), pp. 109-135.

[136] Even the use of DNA fingerprinting in criminal identification can hide uncertain results. For a historical perspective on this topic: M. Lynch - S. A. Cole - R. McNally - K. Jordan, *Truth Machine. The Contentious History of DNA Fingerprinting*, Chicago and London 2008. For further details on the matter: A. Andreoli, *Identità alla prova. La controversa storia del test del DNA tra crimini, misteri e battaglie legali*, Milano 2009.