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# THE SCIENCE OF IDENTITY

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In 1892, a Washington, D.C.–based attorney named George E. Harris published a four-hundred-some-odd-page *Treatise on the Law of Identification*.[1] While there are many famous treatises on the law of evidence and on medico-legal matters more generally, Harris's appears to be the only nineteenth-century American legal treatise specifically on the law of identification. Harris seemed aware of this, as he subtitled his work *A Separate Branch of the Law of Evidence*. Indeed, Aubrey Moriarty, the British author of short pamphlet on the subject, noted that identification was "a subject of considerable difficulty, and which has hitherto received less attention, than from its importance, it would seem to merit. I have been unable to discover any substantive Essay or Treatise in any modern language upon the subject."[2] Moriarty went on to claim that "[i]n the whole range of judicial inquiry there is notoriously no class of cases with which courts of justice have so much difficulty dealing" and that



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> [i]t is only in reference to this class of cases that large sections of society fling aside their habitual reverence for the law, and those entrusted with its administration, and refuse to subordinate their personal convictions to the judgments of judges or the findings of juries.[3]

The resulting compilation reads to modern eyes as a somewhat incongruous, perhaps even Borgesian hodgepodge of topics. Harris's treatise covers the identification of both persons and things and therefore ranges from murder cases to real estate disputes (333) to the identification of patented articles (447). The treatise also contains a number of other legal topics, such as the reversal of felony convictions because of typographical errors in stating the names of the victims (97), disputes over the identity of horses and other livestock based on written descriptions of their color (357), and the bringing of a dog into court to assist the jury "in judging of his temper and disposition" (386). Another issue is the compulsory examinations: the inspection of the body of a defendant for tattoo marks (410) and the compulsory placement of the defendant's foot in footprints (413–14). Another is nonexpert testimony:

> as to the identity (in the case of murder) of the accused and the deceased; as to the identity of a pamphlet, in a case of slander; as to dangers of fire insurance; as to dangers in a railroad car; as to benefit to result from the construction of a ditch; as to comparison

> of footprints; as to the agility and power of fish to resist the ascent of a stream; as to the health of a slave.
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> *(121)*

As to the identity of persons, the means of identification of persons discussed range widely. They include the identification of a murderer by the impression of a corduroy patch on his pants in the soil (8); a felon by the "remarkable shape" of his horse (36); and a murderer by the measurement of footprints nineteen days after the crime (88); the identification of a body "by his peculiar teeth, a carpenter's rule and a pair of shoes" (176); identification of persons on the basis of attire (186); the identification of a robber by the mark of key, with which the robber had been struck, in his face (198); and the identification of an assailant by a mark in the face from a kick by the victim (433).

I introduce Harris's treatise here primarily to illustrate the near complete absence in it of my subject matter, "the science of identity," as the nineteenth century drew to a close. There is no mention of "science" in the context of identification in the treatise, but my point is larger than a historical shift in nomenclature. A "science of identity," as I conceptualize it here, has several qualities lacked by the identification practices discussed by Harris: general utility and independence. First, although a science of identity may not claim to be applicable to all identification problems, it does claim to be applicable to many. As such, it claims to be a solution to identification problems as a general matter rather than, say, merely the solution to an identification problem in a single case. Second, a science of identity claims to solve identification problems without help from other identification practices. It purports to offer a self-contained solution to identification problems. Third, a science of identity claims a high degree of accuracy, if not infallibility. Fourth, a science of identity roots all these claims in an appeal to the authority of "science" as an epistemically privileged form of knowledge that therefore supports these claims to general utility, independence, and accuracy.



In this sense, Harris's treatise may be viewed as a remarkable document in that it records something very close to the last historical moment in which there was *no* science of identity. Today, of course, we are well aware of accelerating technological means of identifying not only persons, through biometrics, but also things, through such affordances as radio frequency identification (RFID) tags.[4] These technologies are based on improvements in the ability to detect, capture, store, index, and store variable physical attributes (like fingerprints, genetic profiles, retina vein patterns, and so on). We, as a society, are wrestling with complex questions about the social consequences of such technologies and whether and how any limits can or should be placed upon them.[5] But whatever social decisions are made, it seems unlikely that it will be possible in the foreseeable future to deny that a "science of identity" exists.

Apparently unbeknownst to Harris, at the very moment of publication, seeds were being sown for this science of identity. The very year his treatise came out in print also saw the publication of Francis Galton's *Finger Prints*, a seminal work in developing that paradigmatic identification technology.[6] Also that same year, Juan Vucetich, a police official in La Plata, Argentina, helped solve a murder case by examining bloody fingerprints, setting the stage for the establishment of the adjunct forensic application of this identification technology that would enhance the public's perception of its social utility.

Harris does not appear to have been aware of the changes that were coming. There is no mention of the anthropometric system of identification that was already in place in France and Argentina and, indeed, in some locales in the United States and Canada, even though anthropometric instruction manuals had already been translated into English, and anthropometry had been discussed in some recent legal literature.[7] There is, curiously, one use of the term "finger

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prints" (100). But this referred to the use of bloody marks found on a stick in the defendant's possession, presumably left by his fingers. The incriminating fact was that the stick with bloody marks was in the defendant's possession; there was no claim about determining that the defendant's fingertips were the source of the marks. Harris was able to use the term "finger prints" with no apparent awareness of the changes that were in the offing.

## I. Treatises and texts

Problems of identification go back centuries.[8] The nineteenth century was no different, and legal treatises struggled with such problems and explored solutions. Wharton's *Treatise on Medical Jurisprudence* declared, "Identification of the person seen with the person accused is established by the testimony of witnesses who have known him long enough to have his appearance impressed firmly in their memory. Such is the evidence of neighbors, old acquaintances, and relatives." Unfortunately, they noted, "Numerous instances, however, have occurred in which such witnesses have been entirely mistaken."[9]

America, with its high immigration, seemingly "open" Western lands, decentralized criminal justice system, and ideological character as a "new world" that promised many a fresh start, may have been particularly vulnerable to problems of assumed and remade identities. As Tocqueville noted during his celebrated tour of American prisons in the 1830s:

> Where passports do not exist, nothing is easier than to change one's name. If, therefore, a delivered convict commits a new crime under a fictitious name, he can very easily conceal his relapse, providing he is not brought back to the prison where he underwent his first punishment. There are, besides, a thousand means of avoiding the chances of being recognized. Nothing is easier than to pass from one state to another, the ties between the various states being strictly political, there is no central power to which the police officers might refer to obtain information respecting the previous life of an indicted person: so that the courts condemn, almost always, without knowing the true name of the criminal, and still less his previous life.[10]



If the authors of legal treatises were oblivious to the coming of the science of identity, at least one science fiction author was not. Within a year of the publication of Harris's treatise, Mark Twain published his novella *The Tragedy of Pudd'nhead Wilson*, which evinced an awareness of a technology so new that he called it "the fad without a name . . . which dealt with people's finger-marks" (7).[11] Twain had, in fact, mentioned fingerprints six years earlier in a story in *Life on the Mississippi* and had written about "double or duplicitous identity" in numerous works, such as *The American Claimant* (1892).[12] But in *Pudd'nhead Wilson* he more fully explored the implications of having a science of identity. Twain, who was famously fascinated by technology and may be regarded as something of a proto–science fiction writer,[13] was remarkably prescient in capturing the central ethical and epistemological quandaries posed by the science of identity.

In this chapter, I focus on these two texts, published nearly simultaneously in this two-year period in the twilight of the nineteenth century, *A Treatise on the Law of Identification* and *Pudd'nhead Wilson*. I do not argue that these texts were necessarily representative of the nineteenth-century discourse on identification but rather that they capture a moment when modern society was on the brink of having a "science of identity." The former text was oblivious to the coming science of identity and thus allows us to understand nineteenth-century identification practice and identification law; the latter anticipated the new science of identity but still within the context of the nineteenth century.[14]

## II. The law of identification in the nineteenth century

Twentieth-century sciences of identification claim high degrees of accuracy. Indeed, some, notoriously, claim infallibility. The claims for nineteenth-century identification practices were much more modest. As Harris noted, questions of identity "are fraught with their dangerous consequences, and difficult in their solution, and are of the greatest importance in the affairs of men. But where is the remedy?" For Harris, there was no technological solution. Rather, any solution "lies alone in caution and prudence. Observation and sad experience admonish courts and juries to the use of the utmost care, caution and prudence" (3). Harris's phrase "caution and prudence" illustrates the modesty typical of nineteenth-century identification practices. There was no process upon which Harris might rely to remove the sense of trepidation and doubt with which he clearly approached the various resolutions to the identification problems he detailed. Similarly, in Britain, Moriarty had described three types of what he called "tests of identity of person" – "physical," "mental," and "moral" – only to dismiss them as not "safe or reliable."[15]

As Harris's treatise illustrates, nineteenth-century identification was a multifaceted process, a sort of pastiche. Twentieth-century sciences of identification are self-contained: a single identification technology, like fingerprinting, genetic profiling, retina scanning, or hand geometry purports to solve all of a set of identification problems, like the maintenance of criminal records or access to a secure area. Rather than being a single technology, approach, or assay, nineteenth-century identification was composed of heterogeneous elements including but not limited to: names, physical features, documents, photographs, handwriting, letters, memories, knowledge, accents, tracks and traces, material objects, animals, attire, behavioral characteristics, family resemblances, wounds, prosthetics, and compulsory physical examinations. Identification had to be triangulated from these various elements, which often conflicted with one another. As Harris noted, identification used to be governed by "the doctrine that the identity of name was evidence of identity of persons" (1–2). "The identity of the name . . . is to be taken as *prima facie* evidence of the identity of the person. It raises a presumption which will stand until it is rebutted or overthrown by countervailing evidence" (58–59). By the close of the nineteenth century, however, Harris noted, this doctrine "has measurably exploded, except in the examination of titles to real estate," and the rule "is not now enforced" (2). According to Harris, identity of name was sufficient to shift the burden of proof to the opposing party but was not definitive proof of identity of persons (2, 58–59).



With names no longer definitive, identification problems were left open to other forms of evidence, none of which proved entirely satisfactory. Harris noted that personal appearance "may seem . . . free from difficulty in the estimation of those unaccustomed to reasoning on the subject" (2–3). In fact, he argued, "the subject is, on the contrary, perhaps one of the most difficult questions with which courts and juries are called to deal" (3). Identification by personal appearance was stymied by "[t]he change in the appearance of the person whose identity is in question, wrought by age, mode of life, hardships, toil and care, sometimes coupled with a skillful disguise" (3). Thus, "[t]he identity of persons by their appearance and by closest examination and scrutiny seems to be far from satisfactory" (4). Another contemporary legal treatise, after recounting a case of mistaken identity, opined:

> This adds another to the numerous recorded cases of mistaken identity, which are almost countless, and which are becoming so frequent of late as very much to impair the value of the clearest and most positive testimony as to whether a certain person was at a certain place at a certain time. If any testimony as to identity of person can be trusted, is it not that of a man as to the woman whom he has courted and just married, and whose face and other personal traits might be reasonably supposed to be clearly and indelibly fixed upon his memory?[16]

And yet all the other potential sources of information were similarly unreliable to varying degrees.

Systematically, nineteenth-century legal treatises raised and dashed whatever hopes of reliability might be imbued in all the available identification modalities. Attire, for example, was doubly pernicious, both unreliable and a distractor from perhaps more reliable information: "The sad comment is, that dress is sometimes more observed and noticed than the person who wears it, and often more easily identified, because more observed; and hence less reliable as a means of human identity" (187). As another nineteenth-century treatise remarked:

> [P]eculiar marks upon the body are a very important, perhaps much the most reliable means of identification. . . . Still such evidence is not always reliable, for a mark of such a nature may exist from exactly the same cause in two different persons.[17]

Yet it was necessary to use evidence, even of questionable reliability. As Harris noted, "While evidence of identity by merely hearing the voice, may not be the most reliable, it has been often received" (9).

What was weak alone, however, might gain strength in numbers. Harris suggested that combining various pieces of evidence could lead to almost certain identification:

> And yet there is an indescribable something by which you recognize him, from general characteristics, or family peculiarities or resemblances, and you may identify him with reasonable, but perhaps not absolute certainty. But if there are any distinctive marks about him, such as lameness, peculiar gait, carriage, manner, loss of a finger, scar on the face or hand, or artificial teeth, or blemish in the eye, these bring a corresponding increase of assurance, and he is identified with greater certainty. And then when he converses, you hear him narrate the incidents of your boyhood days, the reminiscences of youth, the schoolmates, the playgrounds, the teachers, the classes, the Sabbath-school, the church, the minister, the sermons, the playmates, the sports, the fishing, the hunting, the dogs and their names, the beaus and belles, who they married, where they lived, and how many children they had, and their names, the assurance is so full that you can identify him with almost absolute certainty.[18]



This general view of aggregated identification would not change by the time of the publication of Wigmore's much more famous treatise on evidence in 1904. Echoing Harris, Wigmore would note:

> Rarely can one circumstance alone be so inherently peculiar to a single object. It is by adding circumstance to circumstance that we obtain a composite feature or mark which as a whole cannot be supposed to be associated with more than a single object. The process of constructing an inference of identification thus consists usually in adding together a number of circumstances, each of which by itself might be a feature of many objects, but all of which together can conceivably coexist in a single object only. Each additional circumstance reduces the chances of there being more than one object so associated.[19]

Wigmore's treatise, like Harris's, contained no mention of fingerprinting, which was already laying claims to being that "one circumstance . . . so inherently peculiar to a single object" that Wigmore claimed did not exist.

The famous nineteenth-century cases of imposture and mistaken identification – Hoag and Parker, Luther Hause, and, most famously, "The great Tichborne case, which has furnished a

small library to jurisprudence"[20] – all involved contradicting heterogeneous evidence of this type. In New York City in 1801, a court acquitted a married man named Joseph Parker of charges stemming from the accusation that he had committed bigamy by marrying again while posing as a man named Thomas Hoag. In an 1849 case in Bangor, Maine, a man named Luther Hause was convicted of conspiracy to obtain goods under false pretenses for having impersonated a man named James Hause.[21] Most famously of all, in 1866 a man appeared in England claiming to be the aristocrat Roger Tichborne, who had been lost at sea in 1854. Skeptics contended that "the Claimant," as he was called, was in fact a butcher from Wagga Wagga, Australia, named Arthur Orton. Sensational legal proceedings captivated England in the early 1870s, eventually ending with the Claimant's conviction for perjury.[22] Among others, the case clearly had an impact on Twain, most obviously in *The American Claimant*.[23] In the Hoag/Parker case, starkly contradictory testimony by numerous witnesses (4) was resolved by the examination of the prisoner for a scar, which witnesses recalled having seen upon Hoag (427–31). In the Hause case, however, seeming evidence of identity from a scar was later contradicted by eyewitness testimony.[24] In the Tichborne case, appearance, diction, accent, handwriting, manner, and knowledge of family lore were all fiercely contested.

In the famous Sally Miller case (1845), much discussed in nineteenth-century medico-legal treatises, Miller claimed that she was not a light-skinned African American born a slave but rather a German, Salomé Muller, who had immigrated as a child, lost both her parents, and been sold into indentured servitude.[25] Miller claimed that a malicious owner had transformed her from German indentured servant to black slave, essentially "enslaving" her, and she sued for her freedom. Phenotypically "white" slaves were so common in the American South generally – and in Louisiana in particular – that Miller's individual identity could not be resolved merely by inferring from her phenotypic features that she was German.[26] A legal determination of "whiteness," then, entailed far more than a simple phenotypic assessment. All the trappings of nineteenth-century identification were also involved: documents, memories, peculiar marks, family resemblances, behavior, accent, and so on. The first witness to "find" Salomé, Madame Karl Rouff, claimed that she could recognize her "among one hundred thousand persons."[27] There was also documentary evidence of Salomé Muller's movements. But the Supreme Court of Louisiana found particularly convincing evidence of peculiar marks, birthmarks on the inner thighs, about which it had been said "that if Salomé were ever lost, she could be identified 'at the end of a hundred years'."[28] Historians Ariela Gross and Carol Wilson have both noted that the evidence concerning Sally's race was not merely physical. It also concerned behavioral traits like "perseverance . . . good conduct . . . quiet and constant industry . . . moral power, and weight, and influence." Sally was described as "careful and prudent . . . neat in her person, simply in her array, and with no ornament upon her."[29] The court was convinced by all this evidence and concluded, dramatically:

> If they are mistaken as to the identity of the plaintiff; if there be in truth two persons about the same age, bearing a strong resemblance to the family of Miller, and having the same identical marks from their birth, and the plaintiff is not the real lost child, who arrived here with hundreds of others in 1818, it is certainly one of the most extraordinary things in history.[30]

However, John Miller, Sally's erstwhile owner, countersued for fraud, and in the second case he amassed strong counterevidence against Miller's claim to be Muller, evidence that has convinced most modern scholars.[31] Although Miller remained free, she was not able to win her suit to free her enslaved children under the argument that, as children of a white woman, they were free.

The issue of the interaction between individual and racial identification raised by this case will be discussed further later in the chapter.

Late nineteenth-century case law shows similar combinations of heterogeneous evidence. In *Udderzook v. Commonwealth*, a case noted for its early discussion of the evidentiary value of photographs, the court noted "happily" that "the proof of identity in this case is not dependent on the photograph alone" but also on handwriting, "a peculiar ring," recognition by witnesses, mail, and, most controversially, evidence concerning drinking habits. The court noted that "habits are a means of identification, though with strength in proportion to their peculiarity."[32] This allowed the photographic evidence to be considered while preserving the judicial doctrine that photographs constituted "illustrative" but not "independent" evidence.[33] *Udderzook* was only one of many life insurance cases that hinged on evidence of identity. The Hillmon case, better known for its doctrinal role in establishing an exception to the hearsay rule, pitted physical evidence of identity against documentary evidence in the form of (perhaps forged) letters.[34]

## III. Sciences of identity

What was conspicuously absent from this assembling of identity from heterogeneous elements was any sort of identification modality that claimed to be dispositive or definitive, let alone "infallible." With hindsight, of course, we can see the contrast between these triangulated identification practices and biometric systems like anthropometry, fingerprinting, DNA profiling, and even voice and facial recognition which, to varying degrees, would later claim the ability to *stand alone* in determining identity, to be capable of fending off contradictory evidence of supposedly "lesser" types – of being, in essence, *sciences* of identity. Of course, there was such an identification modality in 1892: the anthropometric system of identification developed by Alphonse Bertillon in Paris around decade earlier. And, another one, fingerprint identification, was just coming into being.[35]



Designed to detect repeat offenders who might escape recognition by employing an alias, the Bertillon system of identification was a three-part system. Best known was the recording of eleven anthropometric measurements of "osseous lengths" using fine calipers and rulers. The second part was the recording of physical attributes like hair color, eye color, nose, and, most famously, ear shape, using a rich predefined vocabulary of terms. The third part was the meticulous recording of "peculiar marks," such as scars, birthmarks, and tattoos. The anthropometric measurements served as the method of indexing the records; the description and especially the peculiar marks, served as the confirming evidence of hypothesized identification decisions.[36] Bertillon's identification procedure was thus triangulated identification too but within a self-contained "system." "Biometrics as we know it today can be viewed as [an] extension of Bertillon's anthropometric approach."[37]

By 1892, a number of developments in fingerprint identification had occurred. William Herschel had experimented with using fingerprints to combat fraud among pension claimants in colonial India. He had published a report in *Nature*, prompting a reply from the Scottish physician Henry Faulds, who, while serving in Japan, had recognized the potential of the technique for identification both civil and forensic.[38] The letters to *Nature* piqued the interest of Galton, who published his book in 1892, reporting a crude initial attempt at devising categories of fingerprint pattern types, as well as – not surprisingly considering Galton's eugenic interests – comparisons of the frequencies of the various patterns types among different ethnic groups.[39]

In contrast to the heterogeneous assemblages described by Harris, these new techniques made explicit claims to being science, to being infallible, and to being complete, wholly contained, solutions to the problem of identification. As the American historian Frank Morn observes, the Bertillon system "showed clearly the impact of developing science, specifically forensic science, in the nineteenth century and the struggles going on in the criminal justice system

over adopting it."[40] In 1888, R. W. McClaughry, warden of the Illinois Penitentiary, told the National Prison Association that the Bertillon system "substitutes certainty for uncertainty – a thoroughly reliable identification for the shrewd guess of the detective, or the scarcely more reliable testimony of the photograph."[41] An American translation of Bertillon's manual *Signaletic Instructions* claimed a degree of certainty that legal treatise writers would not have attached to other single modes of identification: "the agreement of the figures [the anthropometric measurements] comes at last to constitute a *quasi-certitude of identity*."[42] The breadth of Bertillon's claims to be able to make identity permanent and mobile, at a level of discrimination down to the individual, were summed up by a quotation by Eduard de Ryckère, a Belgian prosecutor, a quotation that both Bertillon and Galton would appropriate as their own: "to fix the human personality, to give each human being an identity, a positive, lasting and an invariable individuality, always recognizable and easily demonstratable, such seems to be the broadest aim of this new method."[43] In 1896, in an address to the Prison Association of New York, McClaughry and Paul Brown, describing the Bertillon system, declared that "a practical, simple and absolutely certain method of identification has been devised, inexpensive in its operation and of unqualified usefulness."[44]

Rather than relying on an improvised collage of identity guided by common sense, it was hoped, at the close of the nineteenth century, that identification would become mechanical. As San Francisco Police Chief, F. H. DePue put it:

> Nature has furnished us with so much material of fixed or rigid character and mechanism has such a peculiar power for accuracy that it would seem we ought in time be released from the nightmares of horror caused by our too well grounded fears of the alarming possibilities of human fallibility. Nature has given to man in mechanism his best, because safest hand; therefore, by mechanism we hope to properly fix identity.[45]



Such statements reflect the notion of what historians of science Lorraine Daston and Peter Galison call "mechanical objectivity."[46]

Perhaps counterintuitively for contemporary readers, anthropometry had the easier claim to "scientific" status because it was a familiar tool of anthropology and thus "looked like" science. It took longer for fingerprinting to acquire the aura of science. Even into the twentieth century, skeptics continued to concede fingerprinting only a role in aggregated identification. For DePue, an idiosyncratic advocate of a facial identification system, the need for a science of identity was distinctly American. Dismissing the British colonial origins of fingerprinting,[47] he declared:

> But, surely finger impressions are not enough, unaided by any other means of identification. For indifferent Hindus and wandering Arabs it might answer. The English regime has not been considered too particular in the matter of identity of native suspects. We, in America, however, demand something scientifically reliable.[48]

To be sure, the body was crucial for identification in the nineteenth-century too: physiognomic appearance, tattoos, scars, brands, footprints, and so on.[49] But the sciences of identity were different. First, they brought rigor and system to the analysis of the body. Bertillon's page upon page of ear types was a far cry from laypersons' or even supposed experts' verbal attempts to characterize the niceties of the human face.[50] Second, they asserted, perhaps for the first time, that the body alone was sufficient for identification in all cases. The body was *identity*, and identity was nothing more than the body, an idea that still resonates today.[51] As Williams and Johnson put it:

> The marking of individuals to identify them as criminals – to literally incise a social identity into the flesh – may differentiate such bodies but it does not provide a method to tell one marked body from another. That specific practice, of subjecting a body to examination in order to differentiate it from all others, is founded in a range of techniques that culminate in the nineteenth century "science" of identification.[52]

More precisely, the sciences of identification hinged upon a specific claim of a one-to-one correspondence between body and identity: that an "identity" would be linked to a body but linkable to only one body and no other and, conversely, that a body be linkable to one and only one identity, or what Gowland and Thompson have called "one body=one individual."[53] To be sure, the claim was clearer for fingerprinting – which has become synecdoche for this notion of one body=one individual in popular culture – than it was for anthropometry. But Bertillon did make similar claims of one body=one individual for the entire, three-part system.

## IV. The fad without a name

Having learned about fingerprints by reading Galton's book, Twain wove them into the plot of *Pudd'nhead Wilson*, which has been called "the first post-Galtonian novel."[54] *Pudd'nhead Wilson* takes place in Dawson's Landing, Missouri, in 1830. The plot concerns infants who are switched at birth. Both are phenotypically white, but one, Chambre de Valet ("Chambers"), is one-thirty-second part "Negro" and thus considered a slave under the doctrine of hypodescent.[55] Chambers' mother, Roxy, also a phenotypically white slave, switches him with the heir of the household, Thomas "Tom" á Becket Driscoll. The protagonist, David "Pudd'nhead" Wilson, is an attorney, recently relocated to Dawson's Landing. Wilson, a bit of dilettante, dabbles in "the fad without a name," fingerprint identification, recording and archiving the fingerprint impressions of townsfolk for his own amusement. As literary scholar Susan Gillman notes, Roxy gets the idea to switch the infants while Wilson is taking her fingerprints:

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> Because the two incidents occur side by side, the reader is led to anticipate that if one system of personal identification in the novel – names, titles, clothing – is patently unreliable, the other – fingerprinting – may prove to have more accurate differentiating power.[56]

Fingerprints turn out to be dispositive of identity in *Pudd'nhead Wilson*. Two visiting Italian identical twins, Angelo and Luigi Cappello, mirror the ersatz "twins" who were switched at birth. The plot then turns to the murder of Tom's uncle, Percy Driscoll, and the false accusation of Luigi. Wilson represents them, and in the climactic trial scene, he proves their innocence by using fingerprints to show not only that "Tom Driscoll" murdered his uncle but also that "Tom" is not "Tom" at all but a slave.

Twain anticipated the claims that would be made on behalf of fingerprinting – that it transcended the weakness that dogged nineteenth-century identification practices. For example, as discussed, clothing was considered an element of nineteenth-century identification practice. But in *Pudd'nhead Wilson*, reliance on clothing leads the characters to false identifications. Twain writes:

> Even the father of the white child was able to tell the children apart – little as he had commerce with them – by their clothes: for the white babe wore ruffled soft muslin and a coral necklace, while the other wore merely a coarse tow-linen shirt which barely reached to its knees, and no jewelry.
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> *(9)*

The father's identification is, of course, false because the infants were switched. As Gillman points out, the final trial scene of the novel is as much a trial of Wilson's expertise and the epistemological claims of fingerprinting as of the identity of the murderer.[57] In his climactic courtroom speech, Wilson extols the powers of the fingerprint:

> Every human being carries with him from his cradle to his grave certain physical marks which do not change their character, and by which he can always be identified – and that without shade of doubt or question. These marks are his signature, his physiological autograph, so to speak, and this autograph cannot be counterfeited, nor can he disguise it or hide it away, nor can it become illegible by the wear and the mutations of time.
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> *(108)*

He then demolishes all of the canonical nineteenth-century markers of identity:

> This signature is not his face – age can change that beyond recognition; it is not his hair, for that can fall out; it is not his height, for duplicates of that exist; it is not his form, for duplicates of that exist, also, whereas this signature is each man's very own – there is no duplicate of it among the swarming populations of the globe.
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> *(108)*

Here, then, we have the famous two "premises" upon which fingerprint identification, for the next century, would purport to rest. The first was "permanence," the cradle-to-grave stability of the pattern over time. While both fingerprinting and anthropometry posited one body=one individual, fingerprinting made the added claim of keeping this relationship stable across time. Whereas anthropometric measurements obviously remained stable only after anatomical growth was completed and, even then, was subject to some ill defined shrinkage due to aging, fingerprinting purported to keep identity stable from birth (a little earlier, even) through death (a little later, even). Pudd'nhead Wilson established permanence in the same way Herschel, Galton, and others did: "He liked to have a 'series' – two or three 'takings' at intervals during the period of childhood, these to be followed by others at intervals of several years" (9). The second was "uniqueness," the breathtakingly ambitious, never proven, and yet universally assumed claim that each fingerprinting pattern was without duplicate in the entire human population:



> To the untrained eye the collection of delicate originals made by the human finger on the glass plates looked about alike; but when enlarged ten times, they resembled the markings of a block of wood that has been sawed across the grain, and the dullest eye could detect at a glance, and at a distance of many feet that no two of the patterns were alike.
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> *(105)*

These last seven words would become the mantra that supposedly supported the reliability of fingerprint identification for the next century.[58] Emphasizing the point, Wilson declared:

> I have the finger-prints of the court, the sheriff, and every member of the jury. . . . [N]ot one of them can so disguise himself that I cannot pick him out from a multitude of his fellow creatures and unerringly identify him by his hands. And if he and I should live to be a hundred I could still do it!
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> *(109)*

Through these dramatic speeches, Twain presaged the extraordinary strength of the claims of this new science of identity. Far from being subject to the conflicts and contradictions that pervaded identification practices in the nineteenth century, fingerprinting claimed to be a unitary and universal identifier that would trump all other claims about identification. It also claimed to be "scientific"; its practitioner, Pudd'nhead Wilson, is mocked for his "scientifics."[59] More than that, it would claim to be "infallible," a word that became associated with fingerprinting in the popular imagination for the next century until such claims began to come under some derision.[60] *Pudd'nhead Wilson* alludes to this notion on its very first page, in establishing the setting of Dawson's Landing:

> When there was room on the ledge outside of the pots and boxes for a cat, the cat was there – in sunny weather – stretched at full length, asleep and blissful, with her furry belly to the sun and a paw curved over her nose. Then that home was complete, and its contentment and peace were made manifest to the world by this symbol, whose testimony is infallible.
>
> *(3)*[61]

Thus, Twain begins the story with supposedly infallible testimony that is absurd, but at the end of the book he "raises the possibility that the body really can be read infallibly."[62] As literary scholar Cathy Boeckmann puts it, "In a novel where character is most often improperly read . . . a means appears by which one who is trained in a supposed science of the body can arrive at a correct reading."[63] This supposed infallibility trumps not only all other supposed evidence of identity but also all other evidence in the criminal case. It resolves not only identity but the entire mystery:



> In *Pudd'nhead Wilson*, fingerprinting allows the detective to make the misleading signification of Tom's disguises and performances irrelevant. Wilson is thus able to pare away faulty metaphorical and physiognomic readings, leaving a single narrative line based on indexical certainty.[64]

This notion of certainty too is still very much present today.[65]

One key aspect of the marvelousness of these new sciences of identity was that they derived identity directly from the body. For both systems, the body "spoke." Bertillon's system of physical description was actually called the *portrait parlé*. The body betrayed itself.[66] And:

> With Wilson's reading of Tom's bodily gesture, there is no need for the final fingerprint in the indexical chain or for Tom to even speak his own confession. His body confesses for him just as the prints left inadvertently on the glass slide, the mute testimony of his body, previously allowed Wilson to crack the case.[67]

## V. Twain and twins

In *Pudd'nhead Wilson*, fingerprinting correctly identified two individuals who had been mistakenly identified for more than two decades. Moreover, through his distinguishing of the visiting Italian twins, Luigi and Angelo, Wilson shows that fingerprinting can distinguish even the proverbial hardest case for identification: supposedly physically indistinguishable "identical" twins. Tom Driscoll makes a fool of himself when he declares, "The hand-print of one twin is the same as the hand-print of the fellow-twin" (49). Instead, Wilson later declares:

> The patterns of a twin's right hand are never the same as those on his left. One twin's patterns are never the same as his fellow-twin's patterns – the jury will find that the

> patterns upon the finger-balls of the accused follow this rule. . . . You have often heard of twins who were so exactly alike that when dressed alike their own parents could not tell them apart. Yet there was never a twin born into this world that did not carry from birth to death a sure identifier in this mysterious and marvelous natal autograph. That once known to you, his fellow-twin could never personate him and deceive you. *(108–9)*

The theme of twins pervades *Pudd'nhead Wilson* and Twain's work more generally. There are the black and white infants switched at birth, of course, and also the Italian identical twins, Luigi and Angelo. Twain's very pen name was, arguably, a reference to twins, and twins, *doppelgangers*, and imposters appeared frequently in his work. Susan Gillman observes that for Twain such doubles "raise a fundamental question: whether one can tell people apart, differentiate among them." She argues that Twain returned repeatedly, as he did in *Pudd'nhead Wilson*, to "the law as one agent of control that resolves confusions about identity, restoring and enforcing the fundamental distinctions of society."[68]

Over the next century, the ability of fingerprints to distinguish identical twins would be portrayed as the ultimate demonstration of its claim to being a science of identity, and many of these demonstrations would echo *Pudd'nhead Wilson*. Scotland Yard detective John Ferrier would display photographs and fingerprints of the Fox twins, Ebenezer Albert and Albert Ebenezer, in his celebrated exhibit on fingerprint identification at the 1904 Louisiana Purchase Exhibition in St. Louis.[69] The earliest British fingerprint trial, the so-called Deptford Murder Trial ended in the hanging of twin brothers, Alfred and Albert Stratton.[70] Harris Hawthorne Wilder, a professor of Anatomy at Smith College who would emerge as one of the leading American proponents of fingerprint identification in the early twentieth century, collected numerous examples of twins' photographs and fingerprints, supposedly illustrating the distinguishing power of fingerprints.[71] Two American vaudeville performers, Charles and Frank Terry were used to demonstrate the ability of fingerprints to distinguish twins, and they even appeared in one of the earliest fingerprint trials in the United States, *People v. Crispi*, in 1911.[72] The judge, Otto Rosalsky, overruled Crispi's defense attorney, Robert Moore's alliterative objection that presenting the vaudeville twins to the jury was "incompetent, immaterial, irrelevant and inadmissible in this case." Instead, the judge intoned, "Mr. Moore, this is a new science. In our country our law cannot be like a pool, permitted to become stagnant. It has to be flexible and we have to advance in accordance with the times."[73] "Identical" twins continue to present vexing identification problems to courts today, especially because genetic identification, as commonly practiced, does not claim that ability to distinguish twins.[74]



## VI. Identity and race

Of course, the central interest in *Pudd'nhead Wilson* was not merely the distinguishing of identical twins but the simultaneous distinguishing of race: the distinguishing of the black and white "twins," Chambers and Tom. Race was, of course, a crucial theme for Twain. In Wilson's climactic courtroom speech, he emphasizes that the discriminating power of fingerprinting is indifferent to race: "There is hardly a person in this room, white or black, whose natal signature I cannot produce" (109).

"Tom" is able to pass for white because of his white phenotype and because his upbringing allows him to obtain the dress, manners, and accent to pass for white. But fingerprinting exposes the fraud and assigns each individual to his or her "proper" born "race." Fingerprints allow us to see racial identities previously invisible to us, which were obscured by the unreliable physical manifestations of what historian Evelynn Hammonds calls "embodied race."[75] Using

fingerprints, Wilson is able to "see" that Tom is in fact "black" and that Chambers is in fact "white," even when this determination cannot be reached through a visual assessment. Twain is also able to distinguish the Italian twins, whose differences are repeatedly described in terms of color: "One was a little fairer than the other, but otherwise they were exact duplicates" (27). Elsewhere, they are described as "the blonde twin" and "the brunette one" (27, 55, 103).

Race was a common element in problems involving identifying people in nineteenth-century America. For example, Harris discusses a North Carolina case in which a woman was attacked by a "negro man." She and another witness both identified a free Negro as her attacker. However, "It so happened, as many other strange things happen, that there was a slave man or boy in the neighborhood, the very counterpart of the free negro as to color, face and form. . . . The slave boy confessed that it was him that committed the crime, and not the free negro." Both men were brought into court, and both witnesses still identified the free Negro. "Such is the tenacity with which people cling to first impressions, and originally expressed opinions," Harris comments (remarks that would not seem out of place in a contemporary discussion of the "hardening" of memory in eyewitness identification) (421).[76] To make matters worse, one of the attorneys also confused the two men. Eventually, the slave's confession trumped:

> The free negro was released, and the slave boy was hung. The evidence of the woman and the old man made such an impression against the free negro, that some were loth to believe but that it was him; but the slave persisted in his statement of his own guilt, and said just before he was hung that it was all right; he was the one, and not the free negro. *(422)*



This case illustrates the perception of physiognomic homogeneity of individuals of races other than white, especially American blacks, what Peter Hutchings calls "the colonialist Eurocentrism of the idea of indistinguishable natives."[77] It is also notable that the confused individuals are never named but merely described by a combination of legal status and race: "free negro" and "slave boy or man" (thereafter abbreviated as "boy"). In the next case, Harris discusses, however, names are prominent. The Greenwood case was a British case of multiple thefts. Greenwood was identified by multiple witnesses but had an alibi for most of the thefts and strong character evidence. Greenwood's attorney was able to find "another young man of the name of Greenwood, who awaited his trial on a capital charge of felony." The attorney brought this second Greenwood to court and placed him beside his client.

> The witness turned his head towards the dock, when beholding two men so nearly alike, he became petrified with astonishment, dropped his hat, and was speechless for a time, but at length declined swearing to either. The young man was of course acquitted. Greenwood was tried for another offense and executed, and a few hours before his death acknowledged that he had committed the robbery with which the other was charged. *(423)*

Thus, it is claimed that these two individuals had a remarkable resemblance in both physical appearance and name! The stubborn insistence upon the name as an identification technology would persist even into the twentieth century as physically based identification technologies became available. It would appear when fingerprinting supposedly "proved" that its discriminating power was superior to the nineteenth-century heterogeneous approach in the apocryphal 1903 "Will West case," in which two African American convicts, supposedly indistinguishable in physiognomy, anthropometric measurements, and *name* were distinguished by their fingerprints.[78]

The Wests, though apparently not twins, were often described as looking as similar as twins.[79] The West case echoes both of Harris's mistaken identity cases just discussed: the North Carolina case because of the theme of the supposed physiognomic homogeneity of American blacks and the Greenwood case because of the remarkable coincidence of resemblance in both physical appearance and name.

Twain's exploration of how "the appeal of fingerprints lies in their capacity to counteract the confusion presented by undifferentiated hordes of racialized bodies"[80] would also reappear in the 1911 *Crispi* trial, one of the first major American criminal trials involving fingerprint evidence, a trial in which both prosecutor and fingerprint expert adopted the theatrical tactics drawn directly from *Pudd'nhead Wilson*. Not only did the prosecutor present the Terry twins to the jury, the fingerprint expert, Lieutenant Joseph Faurot, duplicated Wilson's courtroom demonstration of having the jurors create fingerprints and then identifying which of them had touched a piece of glass.[81] Crispi's defense attorney, Robert Moore, in arguing that fingerprint evidence was not scientific enough to be used in court, protested that "there might be two other men whose faces would be as unlike as *dark and daylight*, and their finger prints might yet be as like as two peas."[82] Moore's comment reveals that at this historical moment, the question of which was the ultimate identifier," the true "science of identity," was still in play. It was still possible for Moore to imagine the opposite of the scenario posed by Twain: perhaps there is a pair of individuals who are indistinguishable by fingerprint but distinguishable by "race."

In the twentieth century, paradoxically, the suppressing of the racial component of these intertwined acts of individual and racial identification would play a large role in supporting the claims of technologies, such as fingerprinting, to qualify as "science." As race became discredited as a topic of science over the course of the twentieth century,[83] it would be helpful rather than harmful for fingerprinting's claims to the mantle of "science" that it no longer made any claim be able to identify race and could thus claim to reveal only individual, not group identity.[84]



## Conclusion

While periodization is always hazardous, this chapter posits the nineteenth century as a period in which identification practices, especially legal identification practices, moved toward what we might call a "science of identity." I define a "science of identity," as opposed to mere "identification practices," as a system of identification that purports infallibility or near infallibility, that is, independent in that it purports to solve a set of identification problems using a single identification modality – a "panacea for identity verification"[85] – and that invokes the authority of "science" in support of these claims. Defined in this way, "the science of identity" was a product of the twentieth century. Nineteenth-century identification practices offer a valuable glimpse – perhaps our last glimpse – of a world without a science of identity . . . a world that most likely is gone forever.

## Notes

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