A MEDICAL HISTORY OF SKIN: SCRATCHING THE SURFACE

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THE TATTOO IN MEDICO-LEGAL DEBATE,
1850–1950

Gemma Angel

The history of the tattoo in Western civilization has received sporadic and incomplete scholarly attention going back as far as the first century AD, according to some sources. Writing in 1869, the French naval surgeon Ernest Berchon cites a number of early works on methods of tattoo removal, of which Archigenes (AD 97) appears the earliest.\(^1\) Indeed, if it were not for the researches of medical professionals and criminologists from the mid-nineteenth century onwards, the history of tattooing in Europe and North America during this period would be considerably more opaque.\(^2\) The sudden effusion of publications in medical, military and criminological journals from c. 1850 into the early twentieth century reveals the emergence of strong scholarly interest in tattooing. These studies focused predominantly upon typically segregated social milieux – the hospital, barracks and prison – contexts that provided ample opportunity for research to be carried out amongst isolated populations. Occasionally, they also analysed tattoos of colonized peoples. But they mainly concerned tattoos of soldiers or sailors, or else of social ‘deviants’ – prostitutes, criminals or those whose reckless behaviour led them to a clinic for treatment.

Whilst there was often overlap between disciplinary fields, particularly within the developing disciplines of criminology or forensic science and the medical sciences, it is important to note the distinctions between discourses emerging from different geographical locations. For instance, historian Jane Caplan has pointed out that whilst there was a great deal of interest in the tattoo in continental European criminological debate, this preoccupation did not extend across the channel to Britain. She writes that ‘not only was British criminology relatively dissociated from the continental schools, but tattooing was sufficiently normalized that it attracted virtually no official or scholarly attention’.\(^3\) It is not surprising, then, that the first professional tattooists to establish successful trades and international reputations in the later nineteenth century were British and American. Whether their success was enabled by the lack of
a socially pathologizing discourse in the UK and USA, or their sheer visibility within popular culture precluded the development of such discourses, is difficult to establish. However, a survey of the contemporary British and American medical literature reveals that there was some concern for the public health risks associated with tattooing – particularly in the transmission of infectious diseases such as syphilis and tuberculosis.

Although they follow different intellectual trajectories in differing national contexts, interesting analogies between criminological and medical studies of tattooing provide useful narrative linkages to trace the history of the European and American tattoo. In particular, an analysis of the visual material gathered by criminologists and doctors suggests an intriguing congruence in conceptual formulations centring around the visual nature of their objects of study – tattooed skin and skin disease, respectively. In what follows, I will explore some of the similarities in the pictorial strategies employed by criminologists and medical researchers alike in their pursuit of standardized knowledge objects – the criminal and the disease, respectively. I will then move on to consider the complex relationship between medical and folk knowledge of tattooing as health benefit or health risk, and the surprising ways in which these opposing epistemological formulations interacted and were variously taken up by tattooists and medical professionals alike.

Criminological Perspectives on Tattoos: Atavism and Degeneration

With the emergence of the ‘new’ criminology in continental Europe during the 1880s, tattoos developed a particular significance for researchers concerned with identifying reliable signs of criminality within their populations. The antecedent ‘classical school’ of criminology, or penology, came under criticism from the new ‘positive’ school, which challenged the prior emphasis on the nexus of legal code, criminal act and penalty. The classical school’s formulation proposed a ‘typology of crimes’, which Italian lawyer and sociologist Enrico Ferri termed a ‘juridical anatomy’ of deeds. This was rejected by the positive school in favour of a typology of criminals, which sought epistemological grounding in the scientific measurement of ‘dangerous bodies’ and the construction of an ‘anatomy of deviance’. According to this new discourse, ‘Crime [became] a “risk” that human scientists proposed to manage through knowledge of statistical laws and a new attention to the bodies of the criminal’.

Citing Cesare Lombroso, the most famous criminologist of the positive school in his day, historical anthropologist David Horn puts his finger on two central aspects of the new discipline’s approach: ‘Numbers had shown crime to be “an unfortunate natural production, a form of disease, which demanded treatment and isolation rather than penalty and vendetta”’.

The analogy drawn here between criminality and disease is intriguing: according to Lombroso and his contemporaries, criminality was a pathology located within the criminal body, revealed only by the forensic specialist who employed
the appropriate statistical tools to access the truth within. Moreover, the signs of latent criminality lay on the body’s surface, in much the same way that the morphology of cutaneous skin infections revealed evidence of underlying disease. Various physical features, from skull measurements to peculiarities of the ear and anomalies of the palm, were scrutinized by criminologists when constructing taxonomies of deviance. However, of all of the supposed outward signifiers of atavism, tattoos seemed to hold a particular fascination. Tattooing was at this time frequently associated with the ‘primitive’ body and art of the ‘savage’ Other,8 familiar through both colonial experience and public displays of natives in fairs and anthropological exhibits.9 The apparent popularity of tattooing amongst certain groups within European society was viewed by some as a dangerous regression or sign of degeneration.10 In his essay ‘The Savage Origin of Tattooing’, which appeared in Popular Science Monthly in April 1869, Lombroso condemned the ‘fashion’ amongst ‘prominent society ladies’ of London in no uncertain terms:

Tattooing is the true writing of savages, their first registry of civil condition ... Nothing is more natural than to see a usage so widespread among savages and prehistoric peoples reappear in classes which, as the deep-sea bottoms retain the same temperature, have preserved the customs and superstitions ... of the primitive peoples, and who have, like them, violent passions, a blunted sensibility, a puerile vanity, long-standing habits of inaction, and very often nudity. There, indeed among savages are the principal models of this curious custom.11

Thus Lombroso translates the ‘savage’ character of the foreign tattooed ‘Other’ into the criminal nature of the tattooed European. This view is representative of the Italian school of criminology in particular, which proclaimed the ‘inborn’ nature of criminality and emphasized the atavistic. However, fin de siècle scholars throughout Europe advanced similar ideas on tattooing and criminality. Much of the continental debate revolved around the relative popularity of the concepts of atavism and degeneration in the explication of theories of criminality. The French school, championed by physician and forensic scientist Alexandre Lacassagne, advanced the theory of dégénérescence, which highlighted the social etiology of crime. For Lacassagne and his followers, it was the milieu social which was the determining factor in criminal behaviour: ‘The social milieu is the breeding ground of criminality; the germ is the criminal, an element which has no importance until the day where it finds the broth which makes it ferment’.12

The criminological preoccupation with tattoos may be elucidated through a consideration of two factors pertaining to the peculiar nature of the tattoo itself: firstly, the tattoo mark occupies a peculiar boundary, both physiologically and socio-culturally. It appears at the body surface, but is suspended indelibly within the flesh; as Julie Fleming writes, ‘lodged on the border between inside and outside, the tattoo occupies the no-place of abjection’.13 Thus embodying an internal-external dichotomy paralleled in the new criminological formula-
tion of atavistic character and stigmatized body, the tattoo may be viewed as the ultimate symbol of abjection in the context of nineteenth-century crimi-nological discourse – a self-imposed stigmata which scholars themselves found both abhorrent and irresistible. Moreover, as a socially acquired yet permanent physical mark, the tattoo seems to articulate something about the relationship between social atavism and corporeal ‘degeneration’, which, we will see, influenced discussions linking tattooing and skin disease.

The criminological study of tattoos produced an effusion of drawings taken directly from the skin of prison inmates, as well as soldiers and sailors in barracks – all conveniently isolated populations accessible to researchers. Tattoos were categorized according to their symbolism, and motivations read in turn from the symbols; they could signify desire for vengeance, group allegiance, whether regimental or criminal organization, vanity, imitation or idleness. Moreover, their crude ‘hieroglyphic’ style read as evidence of the primitive writing of the criminal. As Lombroso succinctly put it, the study of tattoos ‘serve a psychological purpose, in enabling us to discern the obscurer sides of the criminal’s soul’.

They also provided reliable, self-selecting evidence of social pathology. Thus the second aspect of the new disciplinary approach is revealed in a shift away from ‘penalty and vendetta’, which focused punishment upon the body, and towards ‘treatment and isolation’, which sought to manage the ‘criminal soul’. The newly developing technologies of power-knowledge, which read, interpreted and categorized the surface signs of the body, isolated these characteristics in their data in a process parallel to the isolation of criminals themselves, in prisons and asylums.

Figure 11.1 is exemplary of the kind of visual data gathered by criminologists. Reproduced in the second edition of Henry Havelock Ellis’s *The Criminal* (1895), a drawing of two disembodied arms float on a flat, featureless ground, with numerous tattooed figures decorating each limb. The primary purpose of the image is to illustrate the distribution and relative coverage of tattoos over the arms of an anonymous criminal. In this case, the tattoos are not as significant in isolation as in their cumulative effect, and indeed the claim was made that the extent of a criminal’s tattoos often marked him out from his non-criminal tattooed contemporaries, such as sailors and ordinary working-class men. Havelock Ellis followed the pictorial conventions evident in Lombroso’s *L'uomo delinquente*; the isolation of the arms in the pictorial space, their abruptly ending delineation and the almost complete two-dimensionality of the image has the effect of conceptually abstracting the tattoo from the three-dimensionality of the body. This abstraction made it possible to devise a visual taxonomy, which in turn facilitated the shift away from the ‘anatomy of crime’ and towards the ‘anatomy of the criminal’ that the positive school advocated.

Interestingly, this pictorial strategy paralleled dermatological imagery of the nineteenth century. Figure 10.3 in Fend’s chapter shows an 1826 watercolour and pencil drawing of two isolated segments of a leg afflicted with an outbreak of *Herpes phlyctanodes*. The artist, Robert Carswell, took care to paint only the afflicted body part, the legs appearing like neatly dissected specimens, fading at the margins, while the patient becomes generic and the disease is afforded greater specificity. As Fend demonstrates, this visual strategy facilitated the development of dermatology as an independent discipline in the nineteenth century. The creation of ‘characteristic morphologies’, which could be used for comparison and diagnosis – much like those explored in Stark’s chapter – allowed physicians to perceive diseases as discrete entities, whilst implementing a degree of standardization. This was particularly important in the case of the ‘Great Imitators’ such as syphilis and tuberculosis, whose visual symptoms and effects could easily be misread and misdiagnosed prior to the development of microbial testing.

Whilst the tattoo was mobilized as a kind of socio-pathological signifier within the context of continental European criminology, medical professionals across the channel and the Atlantic turned their attention to the question of tattooing as a factor in disease transmission. In one context, the tattoo was re-coded as social disorder; in another, it appeared as corporeal malaise.

**Medical Reports on Tattoos: Risk and the Inoculation of Disease**

One of the earliest sources to link disease transmission and tattooing is M. F. Hutin’s ‘Recherches sur les Tatouages’, published in 1853. He relates the case of a tattooed soldier, allegedly a virgin, who had been admitted to the Hôpital du Val de Grâce with syphilis. His tattooist was apparently to blame; as the tattoo ink
dried, he re-moistened it using his saliva. With needle thus loaded with ink and *Spirochaetaceae*, the unfortunate soldier was simultaneously tattooed and inoculated with syphilis. The resulting infection was so severe, Hutin relates, that the arm almost required amputation. Hutin shows that French doctors took an interest in the possibilities of disease transmission through tattooing, as did their German counterparts. Nevertheless, criminologists continue to dominate continental discourses on tattooing through the later nineteenth century. The relative absence of criminological debates in Britain and America, in contrast, invites further investigation of medical reports on inoculation via tattooing, allowing a picture, though partial, of an otherwise historically obscured tattooing practice to emerge.

After Hutin, and until the end of the century, only five cases of primary syphilis caused by tattooing appear in the major British and American medical journals. There is only one reported incident of tattooing-inoculated tuberculosis during this period. Reports from 1900 onwards discuss cutaneous lesions of secondary syphilis that were affected by tattoos, but there is no mention of tattooing as potentially causing disease, which may indicate a shift in the professional practices and standards of tattooists. Of the nineteenth-century cases dealing specifically with skin disease inoculated by tattooing, two stand out, both of which are illustrated. The first report, ‘Notes of Cases on an Outbreak of Syphilis Following on Tattooing’ by British army surgeon F. R. Barker, appeared in the *British Medical Journal* in 1889. The images are of particular interest. They are highly unusual amongst the medical literature concerning tattooing and disease, because they clearly illustrate the tattoo itself as the site of infection. Barker’s report describes an outbreak of syphilis at the Portsea army barracks in Hampshire in 1888, in which twelve soldiers were infected with the disease by a single tattooist, who is referred to simply as ‘S.’ Barker located the tattooist, who was said to be a discharged soldier of the regiment and a ‘hawker in the barracks’. After interviewing him about his health and working methods, Barker established that he was indeed infected with syphilis. The article goes on to describe the tattooing method that Barker argued undoubtedly led to the transmission of infection – the tattooist had used his saliva variously throughout the process, either using it to mix his inks, moistening his needles in his mouth, or rubbing saliva directly onto the skin before, during and after tattooing. In all, twenty-three men were tattooed by S. over a three-month period, although only twelve showed signs of infection. The first four cases presented were photographed, and these images appear in Barker’s article, one of which is reproduced here (see Figure 11.2).
Atavistic Marks and Risky Practices

The first two images in Barker’s text show the flexor and extensor surfaces of the forearm, with ulcerated sores emerging from the margins of the tattooed lines themselves. Figure 11.2 reproduces the first of these, identified as ‘Case I’, and depicts the flexor surface of a left forearm tattooed with a flag and a female figure, the lower portion of the tattooed figure corroded by two large syphilitic ulcers. This image bears the typical features of cropping and isolating the affected limb in space common to contemporaneous medical illustrations of skin diseases, and in this respect it shares formal similarities with Carwell’s watercolour in Fend’s chapter (Figure 10.3). In contrast with the forearms depicted in Figure 11.1, however, there is a distinct voluminous three-dimensionality to the limb in this image, which has been reproduced from a photograph. The third image plate in Barker’s article (not shown) presents a much more abstracted image of the infected tattoo, which fills the pictorial space. The syphilitic eruptions have a greater specific character, appearing to ‘bloom’ out of tattooed images of flowers in a pot. It is interesting to note Barker’s subtle aesthetic judgements of these particular syphilitic manifestations: ‘The rupiae were very perfect, like limpet-shells. The ulcers were situated over the site of a flower and a flower pot tattooed by S. on the flexor surface of his left forearm.’ Barker’s description of the rupial sores as a perfect representation of a morphological type suggests...
an important linkage between production of medical imagery and diagnostic standardization, particularly in the case of syphilis, whose surface manifestations are varied and may be confused with other conditions. This third image incorporates a different visual style, essentially presenting an isolated symptom on a flat surface; the skin only becomes legible as such through the surface sign of the disease, and in this case by the inclusion of the submerged tattoo. Similarly, in the work of criminologists of the same period, the surface sign of the tattoo is flattened out and ‘removed’ from the context of the body in the collections of drawings that accompany numerous criminological texts on tattooing. It may be argued that these acts of visual abstraction and isolation contributed to the construction of visual taxonomies within the disciplines of medicine and criminology alike.

Tattoo, body and medical historian James Bradley comments upon Barker’s report of the outbreak with reference to anthropologist Alfred Gell’s metaphor of the ‘epidemiology of tattooing’: ‘we see the quasi-dermatological illness of the tattoo spreading plague-like through a segment of the regiment, followed swiftly by the real disease of syphilis, which asserted its ascendancy by transposing its own mark upon the crudely etched tattoo patterns’. Gell’s formulation, which Bradley adopts, is based upon his observation that tattooing has an observable ‘pattern of occurrence, which resembles the uneven, but at the same time predictable, incident of an illness’. Though seeming to suggest that this pattern is metaphorical, he nevertheless refers to the empirically and theoretically tenuous work of Lombroso, who had identified ‘imitation’ and ‘idleness’ to be two of the primary motivating factors amongst criminals who acquired tattoos. Furthermore, he suggests that in this historical case there may be some veracity in his ideas. This metaphor, which proposes a mechanism of ‘social contagion’ for the spread of physical stigmata (the tattoo), reproduces many of Lombroso’s questionable assumptions. Yet it is also intriguing, in light of these assumptions, to consider the ways in which nineteenth-century medico-legal professionals represented tattooing as a risk factor in the transmission of disease associated with disreputable behaviours.

A second case from the British medical literature concerning the tattoo as the site of skin disease – on this occasion tuberculosis – presents a particularly interesting example in light of the above. This extremely short report is accompanied by two images, which share stylistic similarities to those in Barker’s report, although they are engravings rather than photographs. The transmission agent in this case, as in that involving the Portsea tattooist, was also saliva, although the artist on this occasion was a fifteen-year-old boy who had died of phthisis shortly after tattooing his younger brothers, aged ten and thirteen. He is said to have used Indian ink ‘rubbed up with his saliva in the palm of his hand’. In the first image accompanying the case notes, the tuberculosis infection has destroyed the lower portion of the tattoo, which is described to resemble a rose, heavily scarred and covered with a mass of pustules.
The second image depicts the flexor surface of the forearm, which is tattooed with a heart crossed by two flags, and described in the report as ‘leaving in lines of the pattern deep ulcers with hard, round, smooth edges and granulating bases. The whole design was raised and surrounded with an erythematous border’ (see Figure 11.3). The infection has completely engulfed the tattoo such that the disease itself has taken on the pattern of the design. Thus, according to Bradley and Gell’s formula, we are able to visualize the tattooed sign and symptom of infection merging into one single stigmata of social and physical disorder. It is possible to imagine the tattoo during the late nineteenth and early twentieth centuries as a kind of doubly pathological signifier, inflected with the spectre of social disreputability or even criminality in one social context, and stigmatized disease in another. There may even be overlap between the two: conspicuous diseases such as syphilis were implicated in the spread of social degeneration through the transmission of infectious diseases. Thus in response to outbreaks such as those described, some medical and military professionals were led to conclude that tattooing might pose a risk significant enough to be banned outright, as suggested by the American physicians F. F. Maury and C. W. Dulles in 1878.
Tattooing, we think, might well be forbidden in the army and navy, as a useless and perhaps pernicious practice, one which may injure the men and prove an expense to the government, by bringing into hospital and on the pension lists some who might otherwise be in active service.26

Comments such as these may be considered within the broader development of bacteriology and public health as disciplines. In the United States, bacteriology was introduced in the 1880s, and though American scientists initially made limited contributions to the field, historian George Rosen notes that ‘they were more alert than their European confreres to its practical implications’.27 The development of the American public health laboratory service in the late 1880s paralleled the emergence of bacteriology, demonstrating the medical community’s willingness to employ new scientific techniques for the ‘greater good’ of public health. According to Rosen, the USA was ahead of the trend in this regard, with the earliest bacteriological laboratory established by Joseph J. Kinyoun in 1887, as part of the Marine Hospital on Staten Island, New York. Despite the health warnings of medical professionals such as Maury and Dulles, the tattooing profession encountered few legal challenges based on associated health risks, and then not until the mid-twentieth century.28 Tattooing largely escaped official regulation altogether, until 1988, when three states banned tattooing outright and sixteen introduced some form of regulation. That said, thirty-one states chose not to regulate tattooing.29 Throughout the profession’s early days, it was largely left up to the tattoo practitioners themselves to adopt some form of antisepsis in their working methods. Whilst some tattooists observed basic hygiene, others relied on lay understandings of the practice propagated through oral tradition, which often owed more to folk belief than modern medicine. In practice, a far more complex cultural exchange involving different understandings of the body and medicine was transforming the tattooist’s craft, as well as that of the medical practitioner, as we will see.

Medical versus Folk Knowledge of Tattooing:
Tattooing as a Healing Art

From the late nineteenth century onwards, anthropologists, colonial officials and amateur observers had begun to show an interest in the tattooing practices of the native cultures they encountered. Reports from all corners of the globe recounted the high regard in which tattooing was held within these societies, often as a powerful magical and therapeutic treatment for a variety of ailments and illnesses. Some of these stories were based on careful research, others wild conjecture; many were undoubtedly invented by the new breed of American and European tattooists themselves.30 These new professionals were, by all accounts, a contradictory and somewhat evasive lot. By the early twentieth century, many leading tattooists
where careful to advertise their practice and studios as ‘sanitary’, and were right-
fully wary of suggestions that tattooing could spread disease. However, many
retained – and even cultivated – a mythology surrounding their practice, which
owed more to sailors’ stories and the half-digested foreign reports of the magi-
cal properties of tattooing than to the discoveries of medical science. That many
had been sailors themselves is telling – sailors’ tattoos being amongst the most
talismanic of Western designs. One way or another, by the mid-twentieth century
stories of the protective and healing powers of tattooing had filtered into popular
culture and entered into the mythology of Western tattooists.

An academic source which mentions the healing function of tattoos appeared
in the *Journal of the Anthropological Institute of Great Britain and Ireland* in 1903.
In his study, conducted amongst the lower-ranking soldiers of the Egyptian army,
Dr Charles S. Myers aimed to determine ‘by descriptive, metric and photographic
methods’ what differences may exist between the inhabitants of different regions
of Egypt, although it seems his data was insufficient in this regard. What emerges
instead is a summary comparison of the tattooing practices of different groups in
North Africa. As well as reproducing tattoo marks themselves, Myers also pre-
sented numerous anthropometric measurements and the specific ethnicity of the
1,006 participants in his study. Throughout his report, he regularly refers to the
perceived protective health benefits of tattooing. For instance, in his discussion
of Arab and Kabyle tattooing, he observes that ‘the operation is performed by the
mother on her child, often for mere decoration’s sake, at other times to ward off or
to cure disease’. The study also sought to establish similarities between modern
and ancient Egyptian peoples. To this end, he explores the origins of contempo-
rary tattooing, citing the following reference:

> It is true that Fouquet, when unwrapping the mummy of a Theban priestess (the Lady
Ament) who lived in the eleventh dynasty, observed many white and blue *ante mortem*
linear ‘cicatrices’ on the abdomen and elsewhere; whence he concludes that the
priestess had been treated for chronic pelvic peritonitis in a manner still practiced
among the fellahin of the present day.

Myers concludes that this apparently medicinal use of ‘linear scars and tattoo
marks’ is a very ancient Egyptian practice. He subsequently reports that Egyp-
tian mothers take their babies to be tattooed ‘according to some for the sake of
ornamentation, according to others in order to ward off the evil eye and disease’, and
then claims that ‘even the Copts tatu the cross, in many cases, at least, on
account of sickness’.

A later, more considered anthropological study conducted by Winifred
Blackman into the culture of the fellahin of Upper Egypt, also mentions the
healing properties of tattoo marks in Africa: ‘according to one of my informants,
the dot tattooed at the side of the nostril is sometimes done as a cure for tooth-
She also describes the use of tattooing to cure other specific ailments, such as headache, ‘weak eye’ and possession. To her contemporary readers, it may not have come as a surprise that long-standing or ancient cultural practices of tattooing were bound up with magic and healing ritual. However, what is perhaps more unexpected is the occurrence of similar beliefs within the twentieth-century American and European tattoo community.

Writing in 1933, Albert Parry notes that ‘many Americans and immigrants see medicinal qualities in the very act of tattooing’. He relates the example of John Solinsky, who apparently visited his tattooist, ‘Professor Ted’, every time he felt unwell, and asked to be tattooed on the skin nearest the discomfort. Parry goes on to quote two more New York tattooists, Billy Donnelly and the famous Charlie Wagner (1875–1953), both of whom confessed to having clients who requested this kind of ‘therapeutic’ tattooing. This would sometimes be done without the use of inks, and usually involved tattooing the area around their clients’ rheumatic joints, in order to ease pain and discomfort. Most surprising of all is the San Francisco tattooist Louis Morgan’s statement that ‘It is well known that a good-sized tattoo is as good an inoculation [sic] as any vaccination, and people who have considerable tattoo work on their bodies are generally more healthy than those who have none’. Moreover, it would seem that some of the imported folklore surrounding the healing properties of tattooing were conflated by some American tattooists with contemporary medical reports about the health risks associated with the practice, as this quote from Samuel M. Steward’s memoirs of working as a tattooist in 1950s Chicago reveals:

Old Randy in the arcade shop insisted that a tattoo cured syphilis. Possibly in his dim way he had heard of an article in the Journal of the American Medical Association stating that a syphilitic ulcer on a man’s arm, originating on his wrist and travelling upwards, was stopped dead when it reached the red pigment of a tattoo. No wonder: the red pigment was a spirocheticide – mercuric sulphide, one of the old specifics against syphilis before the days of penicillin. The presence of mercury in the skin was enough to arrest the progress of a shallow skin ulcer; after that, the bugs went undercover.

Somewhat ironically, the influences of folk belief and medical discourse conspire to produce an unfortunate amalgam, resulting in the assertion that a tattoo can, in fact, cure syphilis – apparently encouraged by the unexpected therapeutic side effects of the cinnabar-based red tattoo pigments in early usage. There are a number of articles in British and American medical journals spanning from 1878 to around 1957 dealing with both the adverse and therapeutic effects of mercury-based tattoo pigments. However, the article Steward referenced is most likely University of Michigan dermatologist George H. Belote’s ‘Tattoo and Syphilis’, which appeared in the Archives of Dermatology and Syphilology in 1928. Belote examined tattooed patients with secondary syphilitic eruptions and observed:
On both forearms there were tattoo designs done in dark blue, green and vermilion (mercuric sulphide). In all the designs papules were present in the green and blue, but apparently not in the red. This was made more apparent by the fact that here and there papules occurred in the blue outlining the red, but appeared to stop sharply when the red portion was reached. Since this eruption was extremely profuse, it is assumed to have been more than a mere coincidence that all the red was spared.\textsuperscript{43}

Another commentator in the medical periodicals, Lieutenant Commander Frederick Novy of the United States Naval Reserve, took a particularly dim view of the ‘so-called artists’ who practiced tattooing with ‘no concept of antisepsis’, and thought even less of their premises and methods, which he generally regarded as ‘filthy’. However, he conceded that ‘a theoretic explanation of low incidence of infection may be found in the fact that one of the red dyes contains cinnabar, which is mercuric sulphide. This chemical may act as an antiseptic as the needles are constantly dipped into the dye’.\textsuperscript{44}

Not all medical writers regarded the practice of tattooing with such disdain, however. Intriguingly, some dermatologists explored the use of tattooing for therapeutic and cosmetic purposes from as early as the 1890s. A number of interesting accounts appear in the historical literature describing how doctors adopted tattooists’ techniques and tools for medicinal purposes. These accounts reveal little of the moralizing frequently encountered in the continental criminological literature on tattooing during the period; rather, it seems that some medical professionals had a genuine interest in the new technology of tattooing. The electric tattoo machine in particular, which was invented in 1891 by the American tattooist Samuel O’Reilly, presented a novel method for the introduction of substances other than ink into the skin in a relatively controlled manner. For example, Leeds physician C. Butler Savory tattooed a solution of carbolic acid into the skin of patients with various dermatological ailments. In 1899 he published a report on this ‘original method’, which he termed ‘hypodermic medication’.\textsuperscript{45} He writes:

For localised patches of ringworm, etc., this method of treatment proves eminently successful. I have not as yet tried the treatment for skin diseases depending upon constitutional conditions, but I see no reason why the result of tattooing some of the chronic localised rashes of syphilis liq. hydrarg. perchlor. should not prove successful.\textsuperscript{46}

In this example, we see the argument coming full circle: whilst to some medical professionals tattooing represented a dangerous threat to public health as a vector in the transmission of highly stigmatized diseases, not least syphilis, to others the tools and process of tattooing could be appropriated in the treatment of the very same conditions. Tattooing as a method of introducing therapeutic compounds (often mercury sulphide) into areas infected with skin disease was also suggested as a treatment for pruritus ani in numerous sources throughout the 1930s and 1940s.\textsuperscript{47}
Moreover, the potential artistic or cosmetic merits of the practice were also gradually appreciated by medical professionals. In 1930, New York physician Ludwig Filips advocated in the *Archives of Dermatology and Syphilology* for the cosmetic uses of tattooing for numerous skin defects, including scars and pigment disorders, to apply colour to grafted skin or to treat skin damaged by such diseases as lupus or epithelioma. He went on to discuss colour theory, the appropriate methods and formulas for mixing pigments, and application techniques utilizing a modern electric tattoo machine.48 One might speculate about the apparent appeal of tattooing to physicians such as Filips; the process of tattooing itself suggests certain affinities with medical practices such as inoculation and vaccination. This was clearly not always to beneficial effect – but perhaps the source of medical interest in tattooing was the tattooists’ very possession of a tool so like that of any doctor’s trade. Medical historian Stanley Reiser writes that ‘in general, technologies are created by the existence of possibilities that the prevailing ideas, culture, and social climate of an era suggest to an innovator could be useful, interesting, or profitable.’49 This was certainly the case for the tattooists who benefited from Samuel O’Reilly’s electric tattoo machine – it improved accuracy, was far less painful for the client and increased both the refinement of tattoo designs and the speed with which the tattooist could operate. In the twentieth century, new and innovative therapeutic treatments for diseases developed rapidly;50 it is no wonder that the tattoo machine was seized upon by some medical professionals as a novel therapeutic tool. The development of many medical specialisms were in fact dependent upon technological innovations; similarly, it may be argued that the success of late nineteenth- and early twentieth-century tattoo artists such as O’Reilly, Burchett and Wagner was enabled by the invention of the electric tattoo machine.

Conclusions

In the context of late nineteenth-century criminal anthropology and forensic science, the tattoo was mobilized as a symbol for the transfer of meanings that sought to render the criminal and the ‘savage’ body analogous to one another. Paralleling the processes of segregation and isolation of the patient and disease within the hospital, a similar shift took place within criminology, in which criminals and their outward signs of criminality became the new focus of researchers, who conducted much of their work on the conveniently segregated and isolated populations in military barracks and prisons.

But whilst the influence of criminological anthropometrics gradually waned through the early twentieth century, and the idea of identifying the criminal character through tattoos with it, the medical concerns with the decorative practice remained. The associated risk factors shifted from syphilis and tuberculosis
in the late nineteenth and early twentieth centuries to hepatitis from around the 1950s right up until 1980, and HIV in the 1980s and 90s. The association of tattooing with the disreputable and criminal element in society persisted within American and European popular culture well into the twentieth century, long after the tattoo ceased to be a source of serious criminological debate. As tattooing became more professionalized and hygiene practices improved, the stories of associated health risk also waned. As a parting remark in his autobiographical account of tattooing in 1950s Chicago and Oakland, Samuel Steward takes a pessimistic view of the future of tattooing: ‘I am personally glad that I ended my tattooing career in 1970; I would not for anything in the world be tattooing in this day of AIDS. The time of gravest danger lies ahead for both the customer and the tattooist, who needs whatever advice and help a doctor can give him in setting up the system of antisepsis for his shop.’ Despite his concerns, and frequent mention of tattooing as a HIV risk factor in the medical literature from 1980 until the present day, to date there have been no documented cases of HIV infection caused by tattooing. The regulation of tattooing by public health authorities has undoubtedly made some difference to the conditions and working practices of contemporary tattooists. In the USA these regulations operate at state level, and may take a number of forms, including: requiring the licensing of the tattoo studio, or the tattoo artist; allowing only licensed medical or dental practitioners to carry out tattooing; setting down hygiene standards for studios; or prohibiting tattooing of minors. In the UK, as in some American states, regulation is a relatively recent development. The Tattooing of Minors Act (1969) made it illegal to tattoo a child under the age of 18. It was not until the passing of the Local Government (Miscellaneous Provisions) Act (1982) that both tattooists and their premises required registration with local health authorities. This licensing may well have given the tattooists’ clients greater confidence – an official health authority registration certificate on the wall provides an air of respectability to the tattoo studio – and it is certainly interesting to note that this period coincided with the ‘tattoo renaissance’ within popular culture and a general decline in the number and frequency of medical reports of tattooing-inoculated infection.

Thus the status of the tattoo as a signifier of disreputability – whether considered as a sign of atavism or criminality, or stigmata of infectious skin disease – gradually declined in scholarly discourse over the course of the twentieth century. Though it has not disappeared from discussions of public health risk entirely, improvements in the hygiene practices of tattooists and government regulation of the profession have enabled a shift in cultural perception such that tattooing is no longer considered to be the risky practice it once was.
22. Ibid., p. x–xiv and Plate I. All images from dermatological atlases discussed here are accessible via the Wellcome Images database, at http://images.wellcome.ac.uk [accessed 3 December 2012].
23. Willan, *Cutaneous Diseases*, p. 26 and Plate IV, fig. 2.
24. Ibid., p. 23.
25. For example, thirty-three out of the fifty-five illustrations from Alibert’s 1806 *Description* focus on the head and bust.
29. As is the case of the copy owned by the Wellcome Library (shelfmark: B 43118/B/1 Atlas).
30. R. Carswell, *Notebook*, pp. 103–5. UCL Special Collections. ‘[?]’ has been inserted to indicate illegible words.
32. Foucault, *Birth of the Clinic*, chapter 7 ‘Seeing and Knowing’, p. 112. See also Foucault, *Naissance*, p. 113. Smith translates Foucault’s ‘tableau’ as ‘picture’, and the word can indeed designate both table and picture; in this case, however, as Foucault talks about a structure that is both visual and verbal, ‘table’ seems to be the more appropriate translation.
33. Ibid., p. 113.
34. Foucault, *La naissance de la clinique*.
37. Ibid., p. 73.
38. Alibert, *Description*, plate 41.

3. Ibid., p. 158.
5. Ibid., p. 10.
6. Ibid., p. 8.
7. Ibid.
12. '[L]e milieu social est le bouillon de culture de la criminalité; le microbe, c’est le criminel, un élément qui n’a d'importance que le jour où il trouve le bouillon qui le fait fermenter' (my translation). A. Lacassagne, 'Les transformations du droit pénal et les progrès de la médecine légale, de 1810 à 1912', *Archives d'anthropologie criminelle* (1913), pp. 321–64, on p. 364.
20. Ibid., p. 986.
24. Pulmonary tuberculosis.
28. It is perhaps fair to say that an attitude of ambivalence towards the regulation of tattooing predominated in the USA during this period. For example, following an apparent outbreak of hepatitis caused by tattooing in New York City, on 1 November 1961 the Board of Health closed down all tattoo studios as a danger to health. However, following a legal appeal by the tattoo artists whose livelihoods were affected, the decision was later reversed in 1962. See R. W. B. Scutt and C. Gotch, Art, Sex and Symbol: The Mystery of Tattooing (New York: Cornwall Books, 1986), p.136.
30. Professor of English, novelist and tattooist Samuel Steward discusses the oral culture of tattooing folklore within the context of the Chicago and Oakland tattoo communities during the mid-twentieth century. He writes somewhat disparagingly that the rumours, half-facts, and downright untruths arrive from two sources: the clientele and the tattooists [sic] themselves... Not understanding the why of many things... the tattoo artist – gifted with the wondrous imagination of con-men – are very quick to create logical-sounding stories about the art itself’. S. Steward, Bad Boys and Tough Tattoos: A Social History of the Tattoo, with Gangs, Sailors and Street Corner Punks, 1950–1965 (New York: Harrington Park Press, 1990), p. 82.
31. Writing in 1912, the tattooist Louis Morgan details his method of maintaining sanitary working practices: ‘Keep the needles thoroughly clean by washing in strong antiseptic, such as bichloride of mercury or carbolic acid. Wash the acid off well in clear water and dry with a clean cloth. Then dip in vaseline. When a tattoo is finished wash it with witch-hazel and alcohol in equal parts, and apply some kind of antiseptic healing salve.’ L. Morgan, The Modern Tattooist (Berkeley, CA: Courier Publishing Company, 1912), pp. 59–60. The business cards of early twentieth-century tattooists often made a point of advertising the cleanliness of their studios and practices. Morgan’s own card from 1912 (which is reproduced on the cover The Modern Tattooist) advertises his ‘Thoroughly Antiseptic Method’. Similar examples are found on Herb Antes’s card (1940s): ‘Latest Equipment and Sanitary Methods Used’; and later on Rex Bennett’s card (1960s): ‘World’s Most Sterile Tattoo Studio’. Reproductions of both these cards appear in Lyle Tuttle’s Business Card Collection, pamphlet available at www.tattooarchive.com [accessed 23 August 2011].
33. C. S. Myers, ‘Contributions to Egyptian Anthropology: Tatuing’, Journal of the Anthropological Institute of Great Britain and Ireland, 33 (1903), pp. 82–9, on p. 82.
34. Ibid., p. 85.
35. Ibid., p. 86.
36. Ibid., p. 87.
39. Ibid., p.137; L. Morgan, Modern Tattooist, p. 34.
40. Steward, Bad Boys and Tough Tattoos, p. 82.
41. Cinnabar, or cinnabarite (red mercury(II) sulfide (HgS), native vermilion), is the common ore of mercury.
42. For adverse skin reactions to mercury-based tattoo pigments, see F. G. Novy, ‘A Generalized Mercurial (Cinnabar) Reaction Following Tattooing’, Archives of Dermatology and
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Syphiology, 49 (1944), pp. 172–3; and F. E. S. Keiller and R. P. Warin, ‘Mercury Derma-

43. G. H. Belote, ‘Tattoo and Syphilis’, Archives of Dermatology and Syphilology, 18:2 (1928),
pp. 200–9, on p. 203.


45. For an account of his technique, see C. Butler Savory, ‘Hypodermic Medication in Skin

46. Ibid., pp. 904–5.

47. See R. Turell and A. W. Martin Marino, ‘Technic of Tattooing with Mercury Sulphide


49. S. J. Reiser, Technological Medicine: The Changing World of Doctors and Patients (New
York: Cambridge University, 2009), p. 186.

50. Ibid., p. 187.

51. See A. C. S. Hobson et al., ‘Tattooing as Possible Means of Transmitting Viral Hepatitis’,
British Medical Journal, 1:4768 (1952), pp. 1111–12; and B. F. Smith, ‘Occurrence of

52. See Long and Rickman, ‘Infectious Complications of Tattoos’, p. 616. See also R. L.
Braithwaite et al., ‘Risks Associated with Tattooing and Body Piercing’, Journal of Public
Among Inmates: Implications for Transmission of Bloodborne Infections’, American
Journal of Infection Control, 38:2 (2010), pp. 121–9. It is interesting to note that potential
cases of HIV infection inoculated by tattooing are frequently associated with
criminals, despite the lack of empirically proven links; this is perhaps a lingering contem-
porary manifestation of the ‘doubly pathological’ signification of tattooing which links
criminality with disease.
