Chapter 2

Badness, madness and the brain – the late 19th-century controversy on immoral persons and their malfunctioning brains

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Abstract
In the second half of the 19th-century, a group of psychiatric experts discussed the relation between brain malfunction and moral misconduct. In the ensuing debates, scientific discourses on immorality merged with those on insanity and the brain. This yielded a specific definition of what it means to be immoral: immoral and insane due to a disordered brain. In this context, diverse neurobiological explanations for immoral mind and behavior existed at the time. This article elucidates these different brain-based explanations via five historical cases of immoral persons. In addition, the article analyses the associated controversies in the context of the period’s psychiatric thinking. The rendering of the immoral person as brain-disordered is scrutinized in terms of changes in moral agency. Furthermore, a present immoral person is discussed to highlight commonalities and differences in past and present reasoning.
Meet William Bigg: killer of animals, torturer of his siblings, and molester of girls. On visiting the Kingston Asylum in Ontario, Canada in the 1880s, the British alienist Daniel Hack Tuke gave a comprehensive description of Bigg’s case and diagnosed him with “moral insanity or congenital defect of the moral sense” (Tuke, 1885a p. 365).

In other words, a psychiatric expert passed a verdict on an individual’s moral status by imposing a diagnosis that linked immorality and neurobiology. The assessment of William Bigg occurred within a strand in psychiatry that studied the connections between badness, madness and the brain at the end of the 19th-century. In this context, medically trained experts endorsing neurobiological models of mental disorder gained authority in assessing, interpreting and treating immorality (Ward, 2010; Watson, 2011). The resulting linkage between being an immoral person and having an abnormal brain yielded a specific view on immoral persons: immoral and insane due to a disordered brain (see N. Rose, 2007; Vidal, 2009 on being and having a brain). In general terms, this kind of person is afflicted by brain disorder which induces insanity which then precipitates immoral behavior. The upshot is the possibility to understand those who evince deviant conduct, disobey social convention and violate the moral order not as merely immoral, insane, or criminal, but as neurologically disordered. Here, science unfolds its generative powers. Scientific description, categorization, explanation and action generate specific ways for being human (Hacking, 2007; N. Rose, 1998; Smith, 2007). The resulting understanding of immoral persons as neurobiologically aberrant organisms proved fecund ground for brain scientists and biomedical professionals (Verplaatse, 2009). How then has it become possible to understand immoral persons in terms of disordered brains? And how was neurobiological reasoning applied in individual cases?

The goal of this article is to trace the scientific discourses in the late 19th-century that gave way to this association and to elucidate different conceptualizations
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of immoral persons and their brains. First, the historical background is constituted by
delineating the state of psychiatry and brain science. Next, five exemplary cases of
immoral persons are discussed to highlight details in diagnosing brain-based moral
dysfunction and to illustrate the different neurobiological explanations used. The
puzzles and controversies regarding the diagnoses and explanations are analyzed and
embedded in the historical background. Subsequently, the consequences of
neurobiological understandings of immorality for moral agency are addressed. Lastly,
a contemporary case of an immoral person is introduced as a contrast in order to
show the diversity and complexity of brain-based reasoning on immorality and its
entanglement with the respective knowledge regime.

Bad brains, bad persons: Historical background

At the beginning of the 19th-century, a reconceptualization of mental disorder as
encompassing all aspects of human mind and behavior took place (Porter, 2002). The
range of insanity was broadened. For example, Pinel (1806) introduced mental
diseases that afflicted the emotions. The notion of insanity no longer signified
intellectual defect alone but also affective disturbances
(Augstein, 1996; Carlson & Dain, 1962). Mental disorder concepts surfaced that
targeted disturbed emotions and immorality, such as moral insanity (Prichard, 1835)
and homicidal mania (Ray, 1838). Here, immorality was not being possessed by the
devil, or carrying out a mere perpetration of the law, nor was it a socially caused
phenomenon, but a mental disorder. Hence, immorality was transformed from sin to
an effect of insanity. Rimke and Hunt described this process as the emergence of a
“medical model of vice as pathology” (Rimke & Hunt, 2002 p. 80).

In the context of these developments, immoral persons appeared in the cross-
hairs of psychiatric experts. Immorality and criminality came to be considered as
viable fields of activity for psychiatrists (Harris, 1989; Watson, 2011). Psychiatrists began to testify in courts on culprits’ mental and moral status (Eigen, 1995; Smith, 1981). They appealed to a medical model of health and illness to buttress insanity defenses and to explain deviations from the moral norm: immoral persons were sick rather than merely unethical. Although biology or the brain were not always alluded to in court cases, certain experts influenced the debate on legal responsibility by referring to neural causes of mental disorder (Kroeber, 2007).

In fact, from the middle of the 19th-century onwards, neuro-/biology played a significant role in explaining mental disorder (Ackerknecht, 1968; Shorter, 1997; Wallace & Gach, 2008). Multiple biological theories of mental disorder coexisted. Among them, heredity dominated psychiatrists’ reasoning for several decades (Ackerknecht, 1968). Heredity was a prominent feature in diverse scientific discourses and had different, context-dependent meanings (Müller-Wille & Rheinberger, 2012). In psychiatry heredity signified the idea that psychological attributes or tendencies were inherited from a person’s ancestors. Mental disorder was conferred upon the individual through biological destiny. This notion included immorality: immoral persons were deemed to be the offspring of immoral ancestry. Moreover, criminal anthropologists argued for the hereditary transmission of criminal tendencies. Lombroso’s doctrine of the born criminal and the alleged visibility of immorality in the constitution of the body was a legitimate explanation for criminality to some, but also spurred heated debate (Becker & Wetzell, 2006; Rafter, 2008; Wetzell, 2000). Closely connected to hereditary theory was the theory of degeneration. According to this theory mental disorder and criminality were also inherited, but degeneration implied that they worsened with each generation; degeneration was progressive (Jalava, 2006; Werlinder, 1978). Furthermore, Darwin’s theory of evolution exerted an influence on understanding human beings as well as morality (Richards, 1987). Darwin founded the moral sense on natural principles, proposing that morality had
evolved through the history of humankind. Morality was a sign of high and complex development of a species (Darwin, 1880). Accordingly, immorality was a reversion (see below).

Aside from these biological theories, distinct brain-based explanations for immorality emerged in the 19th-century (Verplaetse, 2009). Although the science of the brain was in its infancy at the time (Finger, 1994), some experts made straightforward suggestions for the cerebral underpinnings of morality. At the beginning of the century, phrenologists Gall and Spurzheim put forth a theory of human character based on cranial protuberances and identified moral areas in the skull (R. M. Young, 1970). As phrenology was criticized and went out of fashion in the course of the century, other ideas on the neural basis of morality emerged within the context of localization doctrine. Roughly stated, the doctrine posited that the brain consisted of distinct centers with specific functions (Hagner, 2008; Star, 1989). For example, psychiatrist Moritz Benedikt assigned morality to the occipital lobes after having studied the brains of dead criminals (Verplaetse, 2004).

Within the materialistic climate in psychiatry (Werlinder, 1978), experts linked the above-described mental disorders of morality (e.g. moral insanity) to brain dysfunction (E. Müller, 1899 for a contemporary review). Consequently, disrupted neural functioning could lead to disturbed moral functioning. This did not take the form of crude determinism in all of the experts’ views. Yet the majority of them maintained that the brain mediated external causes – such as social influence in particular and the environment in general – that is, these factors acted on the immoral person via the brain. Hence, the brain had a double function: it was both a pervasive mediator and a tacit, though potent, causal force. The brain received new executive power that also uplifted its ethical capabilities. In that sense, scientific attempts to make sense of the brain coincided with attempts to equip it with moral ability. However, it is important to note that there was no large-scale brain science of
immorality. Moreover, the quest to pinpoint morality in the brain spurred disagreement among experts. The validity of moral centers and moral disorders was contested (Verplaatse, 2009).

**Exemplary cases of immoral persons**

Thus, the 19th-century witnessed the emergence of psychiatric experts, mental disorder concepts that targeted immoral behavior, and the linking of these concepts to defective biological endowment as well as brain dysfunction. In other words, badness was framed as madness and madness as brain defectiveness. In the view of certain experts, the immoral person transformed from sinner to lunatic to neuropsychiatric patient. Within this historical background, this section describes five exemplary cases of immoral persons from the end of the 19th-century in order to elucidate details in diagnosing brain-based moral dysfunction and to illustrate the different neurobiological frames and explanations used. The cases are taken from diverse regional, legal and administrative contexts, but these differences are not explicitly addressed in the analysis. Rather the focus is on the reasoning, the evidence, the diagnoses, and the problems of deeming immoral persons as brain-disordered at the end of the 19th-century.

**William Bigg (1843–?)**

William Bigg had been a hazard from an early age. Bigg’s family reported that he repeatedly mutilated and killed animals. He tortured his younger brother with a table knife and cut the throat of a neighbor’s horse. Punishment was to no avail. Bigg continued to attack horses, attempted to suffocate a baby sister by piling pillows on her and stole money from his father. The family kept him from being alone with his younger siblings and locked him up during the night. He was sent to a penitentiary at the age of 16 from where he was transferred to an asylum. After being discharged in
his 20s, he once more cut the throat of a horse and on the same day raped a girl. For this, he was sentenced to death. The sentence was then transformed into imprisonment for life in an asylum. When he was pardoned for good conduct ten years later, he again mutilated a horse and was re-institutionalized at Kingston Asylum. There he physically abused other inmates and escaped at the age of 41. He was caught the same day when attempting to rape a girl. For this assault, he was sentenced to a prison term. The files of the Kingston Asylum described Bigg as dangerous, vicious, cunning, devious, but also as infantile, humorless, naive and even “full of good intentions”. The alienists at the asylum wondered at his fascination with blood and his recidivism after long periods of inconspicuousness.

Based on the asylum files on Bigg, alienist Tuke diagnosed him with moral insanity (Tuke, 1885a). The diagnosis had a history of its own. Moral insanity, introduced by Prichard (1835) half a century earlier, initially referred to emotional insanity and did not necessarily imply unethical behavior (Berrios, 1999; Whitlock, 1982). Yet, in the course of the 19th-century the term’s meaning changed and attained an ethical connotation. The fact that Tuke rendered Bigg as morally insane indicates that he used the term in the later sense. In the same year, Tuke purported that a “physical cause” for a person’s immoral behavior was the basis for distinguishing the morally insane from mere sinners (Tuke, 1885b p. 175). Tuke deemed this physical cause to be hereditary and installed in the person’s brain from birth. In accordance with two authorities of the time, Hughlings Jackson and Herbert Spencer, Tuke surmised that the higher functions of the brain were compromised in this condition. The phylogenetically older and more barbaric lower functions were left uncontrolled and elicited wicked behavior: “Such a man as this is a reversion to an old savage type, and is born by accident in the wrong century” (Tuke, 1885a p. 365). In this rendering of Bigg as an atavism, Tuke made use of Darwinian reasoning. The higher functions of the brain signified the uniqueness of the human brain and species. If these
functions failed, the consequence was deterioration into a primitive biological predecessor. Tuke did not clearly identify the physical cause for Bigg’s condition, but he suggested that irresistible impulses guided immoral persons; thus, Bigg had no choice but to be bad. Furthermore, Tuke was aware that understanding immorality as brain disorder had far-reaching consequences. Commenting on Bigg’s conviction to prison in 1884, Tuke writes: “But what is to be done with the man who, from no fault of his own, is born in the 19th instead of a long-past century? Are we to punish him for his involuntary anachronism?” (Tuke, 1885a p. 365). This statement shows the puzzle that brain-based explanations of immorality posed to legal responsibility.

Charles J. Guiteau (1841–82)
The question of immorality due to disorder of the brain was fiercely debated in one of the most popular court cases of the late 19th-century in the United States. After an erratic life of villainy and disappointed aspirations, Charles J. Guiteau shot President James A. Garfield on 2 July 1881. The incident had two major consequences, Garfield died after several weeks and Guiteau’s mental status became a highly contested matter (Rosenberg, 1968). There was no doubt that Guiteau was the offender. Hence, the ensuing trial revolved around the question whether or not he was insane. This trial was as much Guiteau’s as it was a trial of the definition and causes of insanity and immorality. The prosecution experts considered him sane and wanted him hanged, whereas the defense experts did their best to prove him insane. The defense summoned Edward Charles Spitzka to testify in favor of Guiteau’s mental incapacity. Spitzka had spent parts of his education in Leipzig and Vienna and was therefore amenable to European views of mental disorder. These views stressed the influence of heredity for the close connection between neurological and mental disease (Werlinder, 1978). During the examination of Guiteau, Spitzka found signs of an abnormal brain: “The shape of his head and his face, and certain indications of imperfect brain development which I found, those being a defective innervation of the facial muscles,
asymmetry of the face, and pronounced deviation of the tongue to the left” (Spitzka, 1883 p. 210). He interpreted Guiteau’s murderous action as well as his entire indecent life as the result of congenital “disordered brain action” (Spitzka, 1883 p. 216). Thus, he unmistakably declared Guiteau insane. Spitzka’s views on inheritable insanity were modern for the psychiatric establishment in the United States. Though the eminent figures in American psychiatry agreed that insanity was the result of a distortion of the healthy brain, they expressed their doubts regarding the doctrine of heredity and the validity of neurological evidence in general (e.g. Gray, 1882). At the end of the trial, Guiteau’s brain became the object of disagreement. The prosecution asserted that there were no abnormalities to be found in his brain, therefore he was sane. The defense retorted that the state of Guiteau’s brain was inscrutable until it was disclosed in autopsy. The prosecution experts succeeded. The jury considered Guiteau sane and guilty and he was hanged in 1882.

If Guiteau was immoral and insane due to a disordered brain, then the autopsy should have provided evidence for it. However, it did not settle the dispute. According to one group of experts, the assassin’s brain exhibited marked microscopic anomalies in the blood vessels and cellular make-up (Arnold, Shakespeare, & McConnell, 1882). It is noteworthy that these experts refused to make a statement regarding Guiteau’s insanity. Yet the significance of the cerebral aberration for Guiteau’s mental state was controversially discussed. Since it was unknown which qualities of the brain signify immorality or insanity (size, weight, structure, partial destruction?), there was room for antithetic interpretations. Some experts felt confirmed in having deemed Guiteau insane, others denied the validity of the brain anomalies. In a retrospective consideration of the case under the telltale title ‘A Case of Alleged Moral Insanity’, Elwell (1883), a witness for the prosecution, generally disputed the claim that insanity was visible in the brain. In summary, the experts
disagreed on fundamental issues. The diagnoses, the etiology of mental disorder and the validity of brain evidence were highly controversial.

Jane Toppan (1857–1938)
In 1901, another murderer provoked expert disagreement in the United States. Jane Toppan, a private nurse, had gradually poisoned several of her employers. After the homicides, she took loving care of some of her victims’ children and expressed intimate condolences to the bereaved. Toppan experienced no compunction after her actions. This circumstance surprised even her: “Why don’t I feel sorry and grieve over it? I cannot sense it at all” (Stedman, 1904-1905 p. 283). Toppan was not suspected at first. She had a favorable reputation and had cast a veil of elaborate lies to conceal her misdoings. Throughout her life, Toppan had been in the vicinity of several thefts and intrigues, but she was rarely associated with the incidents and never proved guilty. She did not evince pronounced early-onset behavioral abnormalities and led a creditable life, though she had a taste for morphine. The expert Henry R. Stedman (1904-1905), who assessed Toppan’s mental status for the court, described her as clear-headed, sociable, yet manipulative as well as adept at lying.

In her trial, Toppan was found not guilty by reason of insanity and was admitted to an asylum. During her confinement she developed delusions and feared that the asylum staff wanted to poison her. The diagnosis was complicated. Stedman deduced Toppan’s altered mental state from her lack of remorse and self-control, her indifference regarding her situation, as well as her insusceptibility to punishment. A craniometrical examination detected no skull abnormalities; still Stedman surmised a biological cause for Toppan’s misdemeanor. In his view, a detrimental hereditary influence was the cause for her insanity and hence her irresponsibility. The putative biological evidence for Toppan’s condition was hardly conclusive. Stedman alluded to her corrupted family and the circumstance that Toppan’s “disease-history and present mental state correspond with a well-recognized form of mental defect of a moral type
due to congenital degeneration” (Stedman, 1904-1905 p. 284). Stedman’s pointing to Toppan’s corrupted ancestry served as evidence for her insanity within the hereditary model of explanation. However, this line of argument did not convince other experts. Psychiatrist Charles F. Folsom, who had served as an expert witness for the defense in the Guiteau case and who personally knew Toppan, was less decided about Toppan’s insanity or mere criminality (Folsom, 1909). He disputed the presence of a defining biological feature (heredity and the associated brain defectiveness) that could have caused Toppan’s moral insanity. Hence, whether or not Toppan was immoral due to brain disorder or insane at all remained controversial.

Patient E. (1865–93)
In continental Europe similar controversies existed, but European experts had their own views on potential cerebral underpinnings of unethical behavior (E. Müller, 1899). A central question in continental disputes was whether morality could be compromised in isolation leaving the intellect intact. Were there pure cases of insane moral aberration? Psychiatrist Eugen Bleuler spurred the debate by describing the genre-defining case of Patient E. (Bleuler, 1893).4 E. was the offspring of a well-respected and physically and mentally healthy pastor’s family; there were no indications of any hereditary burden. Despite this, E. was recalcitrant and incorrigible from an early age. The family described him as withdrawn and uncommunicative, but as gifted at inventing imaginative stories that soon could only be classified as lies. E. repeatedly indulged in fraud and theft. The subsequent punishment left him unimpressed and did not alter his immoral behavior. Moreover, his parents deemed E. to be incapable of love. He was institutionalized from his late teens. First he was at the mental hospital at Burghölzli where the head of the institution, Auguste-Henri Forel, diagnosed him with a moral deficiency without delusions due to defective brain organization (Bleuler, 1893 p. 59). E. was transferred to the mental hospital at Rheinau in 1884 where Bleuler closely observed him for nine years. Bleuler found
some minor bodily signs of degeneration (e.g. E.’s beard still did not grow properly at age 22) and characterized him as industrious, vain, glib, yet not malicious and also tender with animals. According to Bleuler, E.’s intellect and memory were completely intact. However, E. had neither conscience nor compassion, but was devious, and manipulative to the core. In fact, he was so successful at utilizing the guards that Bleuler had to fine his staff for interacting with E. When confronted with his misdoings, E. disputed all involvement until he was inevitably refuted, then he expressed excessive regret and apologized hyperbolically. Bleuler considered these assurances as lip-service and was convinced that E. lacked the necessary altruistic feelings for true repentance.

It is unclear on what empirical basis Forel diagnosed E. with a defective brain in the first place. Nevertheless, E. was the stereotype of a moral idiot to Bleuler. E. conspicuously displayed intact reasoning and at the same time impaired morality. Though Bleuler allowed for environmental influence, this combination signified brain disorder to him: “There are special functions of the cortex, which in their totality determine the character and the morality of an individual and these functions can be defective in isolation due to inborn or acquired inferiority” (Bleuler, 1896 p. 21). Bleuler did not spell out in detail how E.’s “functions of the cortex” were “defective”. The brain-based diagnosis was not substantiated with evidence from the brain. E. died from typhoid in 1893. It is unknown whether there was an autopsy; E.’s brain state remains a mystery (Cf. Verplaetse, 2009 p. 216).

Christiana Edmunds (1828–1907)
A defective brain was found to have corrupted the ‘chocolate cream poisoner’ in Victorian England. The well-known physician Henry Maudsley testified to his materialistic views (see Wiener, 1990) on immorality in a criminal case that received nationwide attention in 1872.6 Christiana Edmunds, an unremarkable 43-year-old, unmarried woman of middle-class background, was accused of having murdered a
boy in Brighton the year before. In an attempt to murder the wife of a man for whom Edmunds had a fascination, she deposited poisoned chocolate at a confectionery. After some puzzlesolving, the police were able to link Edmunds to the events and she was charged with murder.

Maudsley was among the experts who assessed her mental state. They found Edmunds’ intellect to be immaculate, yet “she would have poisoned a whole city full of people without hesitation, compunction, or remorse” (Anonymous, 1872). Referring to her degenerate family, the experts diagnosed her with moral insanity which to Maudsley was mere brain disorder (Maudsley, 1874). Further, neurobiological evidence to support the diagnosis was wanting.

Most conspicuous in Maudsley’s interpretation of Edmunds’ condition was the completely brain-based explanation for her immorality. The moral defectiveness was solely a cerebral aberration. Edmunds never had a choice; a moral life was not an option with her neurobiological endowment. The inescapability of brain determination was well captured when Maudsley described Edmunds and comparable immoral persons as being “as insensible to the moral relations of life as a person colour-blind is to certain colours” (Maudsley, 1873 p. 133). Accordingly, Maudsley questioned the culpability of those who were at the mercy of their immoral brains. Though Edmunds was sentenced to death at first, she was re-examined after the trial and declared insane (Anonymous, 1872). Subsequently, she was institutionalized at Broadmoor Asylum where she died in 1907.

**Bad brains, bad persons: Late 19th-century controversies**

Bigg, Guiteau, Toppan, E. and Edmunds were accused of breaching the moral order in a variety of ways, ranging from cruelty to animals through cunning to premeditated murder. Their individual histories as well as the circumstances of their iniquities were diverse. What is more important in the context of the analysis: the details (evidence,
justification and theories) for their diagnoses varied, reflecting the heterogeneity of experts’ opinions. Correspondingly, the interpretation of an immoral person’s condition was controversial at the end of the 19th-century. The associated debates testify to the coexistence of diverging expert opinions and indicate the contested nature of the neurobiology of the immoral person. This section further analyses these controversies with regard to the described cases.

Brain-based explanations for immorality
At the end of the 19th-century, various biological explanatory models for immorality coexisted: heredity, degeneration, evolutionary reversion and brain-based models. These models were not mutually exclusive; rather the experts discussed and made use of them in an eclectic way. To varying degrees, some of the experts based their diagnoses on heredity and searched for moral depravity in their patients’ family histories. Thus, the inspection of the forefathers’ moral status was an integral part of the diagnosis. However, experts’ opinions varied with regard to the constitutive power of heredity: Stedman partly built his diagnosis on Toppan’s vicious provenance and Spitzka was at pain to prove Guiteau’s father’s insanity. Contrarily, Bleuler found only few signs of a hereditary burden in E. and discarded this line of evidence. Interestingly, though Bleuler did not deem E. to be a victim of his inherited biology, the expert who dealt with E.’s immoral son, H., considered him to be fully corrupted by his father’s (that is, E.’s) biological legacy (Maier, 1908). In correspondence with the contemporary popularity of heredity within psychiatry, it was alluded to in all of the above cases. In the cases in which experts put forth a brain-based explanation, only Tuke clearly stated a neurobiological mechanism (see above). Maudsley definitely viewed Edmunds as at the mercy of her malfunctioning brain, but he did not state an explanatory mechanism. Bleuler identified the cortex as the seat for morality, but did not explain in detailed anatomical terms how morality was compromised in his patient. Tuke and Maudsley, however, did not link moral insanity with particular
neuroanatomical regions (Verplaetse, 2009 p. 198). Here, it is important to keep in mind that attempts to localize morality in the brain were scarce and contested. At the end of the 19th-century, it was unknown how and where brain malfunction caused immorality.

Regarding the degree of cerebral impact on a person’s morality, the experts’ opinions ranged from complete brain determination over less fateful partial determination to a mere brain-based susceptibility for immorality. Thus, experts in favor of brain-based explanations for immorality differed regarding their line of argument and the degree of cerebral determination. As becomes clear from the expert disagreement described, these neurobiological explanations did not convince all experts at the time. Nevertheless, understanding a person as immoral due to brain disorder was a legitimate option for some of these experts.

Evidence for immoral brains
The experts’ diverging opinions on the involvement of heredity and the brain reflected their uncertainty regarding the question of how to prove immorality in individuals’ brains. In the examples given, brain damage was not as conspicuous as in the famous case of Phineas Gage, whose skull was penetrated by an iron bar in 1848. Gage evinced certain behaviors after his lesion which some experts – until today – interpreted as immoral (Macmillan, 2000). Contrarily, for Bigg, Guiteau, Toppan, E. and Edmunds there were no indications of head trauma. Their brain states were mysterious. There was little the experts could do to elicit the brains’ secrets. Contemporary methods to assess the brain were limited. Skull measurement was dubious, though it was used in the Toppan case. Technologies of the time did not grant access to the living brain. However, the dead brain could be analyzed in autopsy. The results were ambiguous. The controversy over Guiteau’s brain state illustrated experts’ disagreement. Spitzka explained Guiteau’s state via “disordered brain action”, yet he did not clearly identify or localize this dysfunction. His opponents disputed the
validity of his claims. The controversial autopsy could not settle the dispute empirically. It was unknown how precisely an abnormal cerebral configuration could have caused immorality. Contemporary models diverged on this problem and lacked sufficient explanatory detail. In addition to these scientific constraints, there was a scarcity of evidence for a potential brain disorder in all of the described cases. The experts’ rhetorical rather than evidence-based justifications for a given diagnosis are striking: brain disorder was assumed rather than observed. It is noteworthy that although tangible evidence was scarce and the theories vague, cerebral dysfunction remained a potent explanation for immorality.

Immorality as mental disorder
Not only were the causes of brain-based immorality obscure, also immorality as a medical condition was nebulous. Experts attributed moral disorder to heterogeneous cases with varying immoral characteristics (for more cases, see Digby, 1985; Longard, 1907; von Krafft-Ebing, 1900). Labels for the condition were numerous and multifarious. Terms such as “moral mania”, “moral imbecility”, “moral insanity” and “moral derangement” were commonly used, but experts differed in their understanding of the conditions. The question was hotly debated as to whether feelings and morality could be impaired in isolation or whether the intellect too was always affected. The degree and severity of a person’s immorality yielded another problem. Experts disagreed whether immorality was an epiphenomenon or a main symptom of brain-based insanity. For example, Bleuler concluded his study on E. by stating that there were isolated ethical disorders. Furthermore, the issue of a differential diagnosis was pending because morality was compromised in other forms of insanity as well. The fact that the conditions and their potential cerebral causes were ill-defined is reflected in the controversies over the aforementioned cases, perhaps most clearly in the dispute over Guiteau’s mental state. Experts applied their respective theories to the individuals at hand, yielding immoral persons that
epitomized the given theory. Contrarily, famous exemplary cases, such as that of E., influenced the theorizing of generations of experts.

Immorality versus criminality
Brain-based moral disorders appeared not only in medical discourse, but also as potential explanations for culprits’ misdoings. In some cases, the brain intruded in penal decision-making processes: in court, experts offered biomedical explanations for criminality. Especially in murder cases, this practice precipitated disagreement. If immorality and eventually criminality were neurological diseases and if the diseased had to be pardoned, then all criminals could claim to be at the mercy of their brains in order to avoid punishment. Moreover, contemporaries feared looming mass exoneration due to the insanity defense in general (Smith, 1981). These fears were exacerbated by the fact that discriminating between immoral lunatics and mere criminals was problematic. Immorality due to brain-based insanity came in a variety of guises and cloaks. The insinuated brain malfunction affected only isolated parts of the misdemeanants’ personalities – that is, their moral capabilities in certain situations – while their perception, reasoning and other social capabilities remained sound. This narrowness of the moral defect made the distinction between brain-based immorality and criminality even more problematic.

The experts’ contradicting interpretations of Guiteau’s and Toppan’s mental conditions illustrated that a mutually agreed-on demarcation criterion was wanting. As a consequence of this arbitrariness, the respective experts destined Toppan to the asylum and Guiteau to the gallows. However, contemporary experts were wary regarding this issue of tenuous diagnoses. For example, Tuke warned that for attesting moral insanity careful consideration of the individual circumstances was indispensable (Tuke, 1885b). Other experts rejected the distinction between badness and madness altogether. Bleuler used E.’s case to argue for the inadequate demarcation between insanity and criminality and flatly rejected a potential distinction.
Chapter 2

Rethinking immoral persons in terms of bad brains

In the above cases, thinking of immoral persons in terms of disordered brains altered what it means to be immoral. Though contended, the immoral persons discussed were conceived of as viable objects for brain science, psychiatry and medicine: their misdoings were observed on a behavioral level, their actions were evaluated with ethical standards and they were punished according to the law. Observation, evaluation and reprimand were part of the social purview, yet the respective experts sought the causes for their misconduct in their neurobiology. In that sense, these immoral persons were understood as hybrids composed of individual, social, ethical, but also neurobiological features. They retained their moral qualities, but biology was added as a potent influence on their moral nature. This extension abridged and augmented these immoral persons at the same time. On the one hand, ascribing moral qualities to the brain reduced part of the personhood to cerebral functioning (see also Vidal, 2009). Accordingly, their moral agency and self-determination were curbed. Their brains were beyond their control. This divested them of having reasons for their immoral behavior, as natural causes putatively determined it. On the other hand, the neurobiological purview augmented these immoral persons. Their brain architecture, their biochemical composition and their hereditary make-up were now integral parts of their moral being. A new domain of biological predisposing and eliciting conditions was added to their personhood and their moral state.

When it took place, this transformation of immoral persons had multifaceted and far-reaching consequences. With the alteration of their anthropological status, specific ways of exonerating or doomng arose. Considering immoral behavior to be the consequence of an insane brain divested immoral persons of responsibility in a twofold way. First, the brain as a part of nature could not be held accountable. Second, persons being subjected to disease were not liable either. Nature and disease prevented the ascription of responsibility and guilt to immoral persons. In other
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words: blaming the sick or the brain was vacuous. Scholars in the 19th-century were aware of these consequences. Some warned of unwarranted absolution through disorder and rejected this model of responsibility (Smith, 1981). Others were wary of determinism and the associated incapacitation of immoral persons (Rosenberg, 1968).

Yet aside from looming exculpation, understanding immoral persons as being determined by their brain is also dooming. The brain became a new personal risk factor that abode by its own neurobiological rules. An affliction of the brain could lead to a distortion of a person’s morality. If this affliction was permanent, then the potentiality for change was limited or even non-existent. Consequently, immoral persons were unalterable and remained wicked until death (see N. Rose, 2007). Ramifications for the penal system ensued. As experts of the biomedical profession took the stage to assess, judge and counsel immoral persons, their legal status had to be reassessed. If immorality was a feature of the brain and thus beyond immoral persons’ control, the institutional decision to transform delinquents into prison inmates and the mentally disordered into patients needed reworking.

To summarize, these controversies mirror the discourse on immoral persons at the end of the 19th-century. In the foreground, certain experts diagnosed immoral persons with specific brain-based diseases of morality. In the background, disagreement loomed on the conflation of badness, madness and the brain. Despite the ongoing debate, a reconfiguration of moral agency took shape.

A new controversy: A contemporary case

Now meet Brian Dugan: kidnapper, rapist and murderer. In contemporary Chicago, USA, neuroscientist Kent Kiehl examined Dugan’s brain with functional magnetic resonance imaging (fMRI) and testified in court that its patterns of activation resembled those of other psychopaths (Hughes, 2010; G. Miller, 2012). The respective expert surmised a neurological aberrance and deemed the culprit’s misconduct to
result from brain dysfunction. The allegedly hampered functioning of his brain was presented as a mitigating condition in court: the neurobiological allegedly interfered with the ethical.

In the century that stands between Dugan and Bigg, Guiteau, Toppan, E. and Edmunds neurobiological views on the immoral person did not play a major role in scientific discourse. Ideas on biology and morality surfaced in diverse contexts: eugenics and race-ideology in the Third Reich (Wetzell, 2000), sociobiology (e.g. Wilson, 1975) and interdisciplinary debates (Stent, 1978). The reasons for their marginal role need further investigation (but see Schirrmann, 2013b). Verplaetse (2009) argued that brain-based theories on morality gave way to more psychological views around 1930 because of continuing criticism and unresolved controversy. For the American context, historians stated that biological explanations for being human did not fare well with the changing political climate at the beginning of the 20th-century (Cravens, 1978; Degler, 1991).

Contrary to its reduced relevance in the past century, the neuroscience of the immoral person has become en vogue in recent years (Sinnott-Armstrong, 2008). In the present brain culture (Thornton, 2011), there is an abundance of neuroscience-based niches for human identity. Various sorts of people are rendered intelligible in terms of their brains (Dumit, 2004; Ortega & Vidal, 2011). The immoral person being subject to a disordered brain represents such an option for being human; Brian Dugan epitomizes it. At first sight, Dugan’s case appears familiar in the light of the historical cases. However, the contexts (historical, cultural, political, administrative, scientific, etc.) differ. In the present, hereditary explanations for mental disorder or immoral behavior are less salient (but see Raine, 1993) and present genetics and old heredity are not similar (Müller-Wille & Rheinberger, 2012). Moreover, modern methods and technologies, such as neuroimaging, allow for an assessment of the living brain, whereas in the past autopsies decided on the immoral person’s brain state.
Neuroscientific theorizing has moved beyond the localization doctrine and its search for moral centers. Today, it is believed that the brain functions as a network, in which various areas interact in constituting morality (L. Young & Dungan, 2012).

In addition, the present scientific project of describing, explaining and acting on immoral persons in terms of their disordered brains is a growing, but marginal, current that has not yet merged with the scientific mainstream. The underlying neuroscientific doctrine is contested and by no means universally agreed on in the scientific community. Other views on the moral and the immoral person exist (Narváez & Lapsley, 2009; Noam, Wren, Nunner-Winkler, & Edelstein, 1993). Thus, present immoral persons are complex: they are not ‘flat characters’ in terms of their brains. The mental disorder label used (psychopathy) is contested (e.g. Mullen, 2007) and the neural underpinnings of morality remain elusive (e.g. L. Young & Dungan, 2012). Furthermore, there is still no consistent, over-arching theory of the neurobiology of im-/morality (Suhler & Churchland, 2011). Though the contemporary neuroscience of the immoral person is nascent only, the present surge in brain-based descriptions of being human and the associated practices of diagnosing, policing and potentially treating people in terms of their brains might catapult the project from the curb to the center of science and society.

**Conclusion**

First, the diagnosis of immorality due to brain disorder was an option at the end of the 19th-century; however, experts who made use of it faced strong criticism. Other experts challenged the underlying biological theory, the evidence in favor of the diagnoses as well as the diagnoses themselves. The resulting disagreement among experts is indicative of the tenuous standing neurobiological views on immorality had. The controversies indicate that despite a materialistic climate in late 19th-century
psychiatry in which it was widely acknowledged that mental disorder is brain disorder, brain-based views about the immoral person were contested.

Second, the neurobiological frames for the mentioned immoral persons were diverse. Diagnoses reflected the experts’ specific training and preference. Depending on the given context and individual convictions, the experts made use of specific brain-based explanations for immorality in their patients. The details of these assessments differed and indicate that a unified view about immorality and the brain did not exist among supporters of the idea. Moreover, empirical evidence for immoral brains was scarce and contested. As a consequence brain dysfunction was alluded to rather than demonstrated.

Third, the emphasis on an immoral person’s adverse neurobiological constituents indicated changes in thinking about immoral persons at the end of the 19th-century. This framing abridged and augmented the immoral person’s anthropological status, resulting in a hybrid immoral being whose ethical prowess is partly determined by neurobiological factors. The associated prioritizing of the brain enabled a specific group of experts that promulgated the unity of neurobiology, mental disorder and immorality to gauge a person’s moral status. Accordingly, the immoral person could be framed as both: a person and a culprit as well as an organism and a patient. This diversity of identity had repercussions for the immoral person’s legal status. The brain-disordered immoral person posed a problem for discourses on responsibility, culpability, punishment and custody.

Fourth, current views on the neurobiology of immorality share some of the features of these late 19th-century views, but differ in important respects. The brain is invoked differently now when compared with the past. The details of brain-based explanations for immoral mind and behavior vary, reflecting contemporary neuroscientific methods and theories. Yet, the transformation in what it means to be immoral that was brought about by thinking of immorality as an attribute of the brain
remains viable and still poses a challenge to discourses on moral agency and legal responsibility. The associated question whether brain science can mediate the justification for the decision between prison and asylum has been the source for discussions in the past and present (Kroeber, 2007; Schleim, 2012).

To conclude, the histories of the described immoral persons and their disordered brains present themselves as histories of discord. They are a composition of intensive academic argument, polymorphic etiologies and shifting nosologies, as well as immoral persons with heterogeneous identities, debatable scientific labels and putative brain-based constituents for immorality. As the persistent controversy on the neurobiology of im-/morality makes clear, harmony has not yet been attained. The coherence from disordered brains to insanity to immoral persons remains contested: at every link of this putative causal chain there was and is equivocality and tolerance for interpretation.