Summary. First described in British medical journals in 1813, delirium tremens became a subject of intense interest in the Philadelphia medical community in the 1820s. While the linkage between alcohol abuse and insanity had long been widely accepted, the delirium tremens diagnosis separated the disorder from other forms of mental illness and established the inebriate as a distinct category of study and treatment. Through dissection of the disease's victims, doctors searched for the effects of habitual intoxication on the body and soon turned to investigate the physiological basis of the inebriate's compulsion to drink, thereby shaping later nineteenth-century conceptions of the pathology of alcohol abuse. Medical interest in delirium tremens emanated in part from a broad cultural fascination with the supernatural and hallucinations. Doctors filled the medical literature on the disease with detailed descriptions of phantoms, ghosts, and other forms of supernatural horror. In the context of the depression that followed the financial panic of 1819, delirium tremens became a highly symbolic phenomenon that resonated with the economic instability faced by the urban middle class. Doctors' detailed accounts of patients' hallucinations quickly passed back into popular culture, shaping a new and dark conception of the psychology of inebriety in antebellum America.

Keywords: delirium tremens; alcohol withdrawal; alcoholism; addiction; insanity; anatomy; supernatural; hallucinations; Benjamin Rush; Edgar Allan Poe

Edgar Allan Poe’s short story ‘Metzengerstein’ is about a young Hungarian baron who celebrates the death of his parents and his newly inherited wealth with three days of ‘shameless debaucheries—flagrant treacheries—unheard of atrocities’. On the night of the fourth day, while the Baron is sitting alone in a room high atop his ancient castle, a black phantom horse comes alive in a wall tapestry and charges at him. Terrified, the Baron flees to the courtyard and there finds that his stable hands have just captured a magnificent black horse that had been wandering free in the castle grounds. The horse, Poe suggests, is the reincarnation of Duke Berlifitzing, the Baron’s hereditary enemy. Berlifitzing had died that night in a suspicious stable fire, very likely started by the Baron during his destructive debauchery.

Over the next few weeks, the Baron rides the horse with ‘a hideous and unnatural fervor’, developing ‘an attachment which seemed to attain new strength from every fresh example of the brute’s ferocious and demon-like propensities’. One night, while the Baron is out riding, a mysterious fire engulfs his castle. Galloping out of the forest, the horse and rider charge into the conflagration and are incinerated:

The career of the horseman was indisputably ... uncontrollable. The agony of his countenance, the convulsive struggling of his frame, gave evidence of superhuman
exertion: but no sound, save a solitary shriek, escaped from his lacerated lips, which were bitten through in the intensity of terror.¹

Many of Poe’s stories link alcohol, compulsion and supernatural occurrences.² Literary scholars have described these themes as explorations of drug-induced mental states and the psychology of alcoholism, and attributed them to Poe’s personal struggle with drinking.³ This paper will argue that the imagery and themes explored in ‘Metzengerstein’, Poe’s first published short story which appeared in Philadelphia’s Saturday Courier in 1832, are in fact drawn from medical literature published in the city over the previous 15 years. In the late 1810s and 1820s, the Philadelphia medical community became fascinated by a newly classified ‘species of insanity’ caused by heavy drinking. While doctors assigned different names to the disease—febris temulentia, delirium vigilans, mania á potu, and delirium tremens—they agreed on its striking symptoms. These included uncontrollable trembling, seizures, intense paranoia and vivid hallucinations. The appearance of delirium tremens in early nineteenth-century Anglo-American medical literature marked the emergence of a new framework for understanding the problem of alcohol abuse. The classification of the disease was linked to broader intellectual developments in medicine and especially a new emphasis on clinical observation and post-mortem dissection. Dissecting the bodies of the disease’s victims, doctors searched for its roots in the internal organs, describing inflammation, congestion and other consequences of frequent intoxication. As the investigation of delirium tremens progressed, doctors expanded their inquiry from the pathology of alcoholic insanity to the physiological basis of the drunkard’s compulsion to drink—the nature of intertemperance itself.

Central to this newly rigorous, empirical discourse we may also note, paradoxically, a fascination with the intense hallucinations associated with delirium tremens. Medical journals, university lectures, student dissertations and institutional records detailed stories of the phantoms, vermin and other forms of supernatural horror that haunted these patients. Doctors theorised that natural, somatic causes produced the apparitions. Habitual alcoholic stimulation, they reasoned, created a debility in the body that, in turn, diseased patients’ mental faculties. But while doctors prefaced their observations with scientific theories, much of the writing on delirium tremens offered lurid details of patients’ ravings and often devoted as much effort to describing the demons of delirium tremens as addressing pathology or treatment strategies. In subjecting delirium tremens and intemperance to the mastery of scientific rationality, therefore, doctors framed inebriety as both a physical disease and the stuff of nightmares: a phenomenon both natural and supernatural.

Beginning with Harry G. Levine, historians of medicine have often cited the Philadelphia physician, Benjamin Rush, as being the first to articulate a modern ‘disease theory’ of addiction.⁴ However, my purpose here is not to ask what constitutes

a ‘modern’ view of alcoholism. Instead, this paper traces the history of early nineteenth-century medical responses to alcohol abuse by asking why Philadelphia physicians adopted the delirium tremens diagnosis when they did, and how the disease shaped medical and cultural conceptions of alcohol abuse. This paper will demonstrate that delirium tremens, first described in the year of Rush’s death in 1813, marked the emergence of the inebriate as a distinct category of medical study and treatment.

**The Roots of Delirium Tremens**

The intellectual roots of delirium tremens grew in the increasing concern among eighteenth-century doctors with the health consequences of heavy drinking. This concern was new, as doctors in the seventeenth century rarely saw alcohol as a cause of mental disease.\(^5\) Cheap distilled spirits were becoming increasingly available in the British-Atlantic world, a trend that would extend into the early nineteenth century. In England, the amount of distilled liquor consumed by the average adult increased by more than seven times between 1700 and 1743, from one-third of a gallon per year to 2.2 gallons.\(^6\) In America, also, the consumption of distilled liquor doubled between 1720 and 1790 and was to increase by another 25 per cent by the 1820s.\(^7\)

The psychological theories developed in the Scottish Enlightenment shaped the Anglo-American medical reaction to this new social phenomenon. In the eighteenth century, Edinburgh was the preeminent centre of medical thought in Western Europe, and there the human mind and mental life were at the centre of philosophical and medical inquiry. In the midst of a rapidly expanding commercial empire, preserving morality and social cohesion in an increasingly fractured and individualistic society were central concerns of Scottish thinkers.\(^8\) This fragmentation threatened both traditional social bonds and individual psychology. The starting point for Enlightenment theories of psychology was John Locke’s *Essay Concerning Human Understanding* (1690). Locke reasoned that all human knowledge derived from distinct, individual impressions gathered by the human senses and bound together in the mind to form complex ideas. In the mid-eighteenth century, David Hume explored the implications of Locke’s view of the mind and reached troubling conclusions about the limits of rationality. In particular, Hume argued that if all knowledge is the product of distinct impressions, then knowledge of the self is impossible. The self, he reasoned, is only a bundle of impressions provided by the internal senses and bound together by the imagination. These impressions ‘succeed each other with an inconceivable rapidity and are in a perpetual flux and movement’. The self, then, has no continuity. Any sense of identity is only imposed by the imagination on a perpetual flux of moving impressions.\(^9\)

Hume’s conclusions about the fragility of the self troubled subsequent medical writing on mental illness. Doctors saw numerous threats to the healthy psyche, and habitual

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\(^5\)For example, alcohol and intemperance are only briefly mentioned by Robert Burton, who is probably the seventeenth century’s most widely read author on mental illness; Burton 1883, pp. 146–7. Nor does alcohol appear as a major concern in the practice of physician Richard Napier; MacDonald 1981.


\(^7\)Rorabaugh 1979, pp. 8–9.

\(^8\)Dwyer 1987, pp. 1–7; Bryson 1945, pp. 6–7.

intoxication ranked among the most dangerous.\textsuperscript{10} The physician, Joseph Mason Cox, argued that the mental consequences of excessive drinking could even be hereditary, and observed that ‘drunken sires are frequently succeeded by insane children.’\textsuperscript{11} Doctors did not, however, see insanity induced by drinking as distinct from other forms of madness.\textsuperscript{12} Erasmus Darwin, in his extensive treatise \textit{Zoonomia: Or the Laws of Organic Life in Three Parts} (1794), described delirium ebrietatis as being ‘nothing different from the delirium attending fevers except in its cause, as from alcohol, or other poisons’. Alexander Crichton, in his \textit{Inquiry into the Nature and Origins of Mental Derangement} (1798), pointed to alcohol as one among several causes of an easily treated form of insanity of short duration, which he termed ‘phrenzy’.\textsuperscript{13}

In America, the University of Pennsylvania had been the centre of medical education in America since first offering medical courses in 1765, and the four founding faculty members of the medical school—John Morgan, William Shippen, Jr., Adam Kuhn and Benjamin Rush—had all received their education at Edinburgh in the 1760s.\textsuperscript{14} Rush was America’s most prominent physician in the decades after the Revolution and wrote extensively on psychology. A signer of the Declaration of Independence, Rush was also deeply concerned with the development of the new United States and was convinced that the formation of a virtuous electorate alone could ensure the success of the new nation.\textsuperscript{15} Writing vigorously on a range of issues, including abolition, education reform, penal reform and temperance, Rush set out to lay the foundations for a new ordering of society that he believed would foster an enlightened, republican citizenry.\textsuperscript{16}

Rush’s training in Enlightenment psychology and his commitment to the success of republican government shaped his temperance writing. In his classic pamphlet, \textit{An Inquiry into the Effects of Spirituous Liquors}, first published in 1784, Rush linked the use of liquor to a plethora of health problems including jaundice, gout, liver disease, epilepsy and insanity. He also asserted that drunkenness was itself a progressive disease. But the central concern of the \textit{Inquiry} was the corrupting influence of liquor on society:

\begin{quote}
Should the customs of civilized life preserve our nation from extinction ... by those liquors; they cannot prevent our country being governed by men, chosen by intemperate and corrupted voters. From such legislators, the republic would soon be in danger.
\end{quote}

In his strictly medical writing, Rush did not expand on his assertion that intemperance was a disease until very late in his life. In 1812 Rush advanced a pathology of habitual drunkenness grounded in eighteenth-century Enlightenment psychology. Rush argued that

\begin{flushleft}
\textsuperscript{11}Cox 1811, p. 20.
\textsuperscript{12}Lettsom 1791.
\textsuperscript{13}Darwin 1804, p. 263; Crichton 1976, p. 157.
\textsuperscript{14}Jimenez 1987, p. 67.
\textsuperscript{17}Rush 1981, p. 27.
\end{flushleft}
drinking distilled liquor deranged the moral faculty, the mental capacity which gave individuals an innate sense of right and wrong. This ‘moral derangement’, in turn, diseased the will, causing a loss of control over drinking: ‘The use of strong drink is at first the effect of free agency. From habit it takes place from necessity’. Rush emphasised that all drinkers of distilled liquor were in danger; ‘where the line should be drawn that divides free agency from necessity, and vice from disease, I am unable to determine’. Rush’s concern with the vulnerability of the moral faculty extended beyond liquor, as intemperance was only one of a constellation of diseases of the will, which also included murder, theft and lying.18

Rush believed that through medical science the ‘empire of Reason’ would triumph over intemperance and other forms of unreason.19 His investigations of diseases of the will were an attempt to develop a more solid psychological basis for reason and morality, and enlist medicine in developing a virtuous electorate. Rush’s disease-of-the-will model, however, did not gain many adherents in the medical community. Records at the Pennsylvania Hospital, where Rush worked for almost three decades, demonstrate that the hospital did not treat patients overcome by intoxication.20 He did attempt, in 1810, to secure funds to build an inebriate asylum devoted to the treatment and reformation of habitual drunkards, but his initiative did not come to fruition.21 Further, Rush’s theories on the will did not persist after his death in 1813. Physician George Hayward, in a review of Rush’s treatise on the mind published in 1818, dismissed diseases of the will as ‘rarely, if ever, subjects of medical treatment’, and as such unworthy even of description.22 Rush’s legacy would be a deep, moral concern with the threat liquor posed both to the individual and society, not his specific theories on the nature of intemperance.23

The first descriptions of delirium tremens appeared in British medical journals in 1813.24 In America, widespread interest in the disease was due in large part to the efforts of a physician at the Philadelphia almshouse, Dr Joseph Klapp.25 Beginning in 1817, Klapp promoted a radical cure for delirium tremens involving harsh emetics, a treatment that inspired widespread debate over the pathology of the disease and the

18Rush 1962, pp. 264–6, 360.
20Pennsylvania Hospital, Patient Admittance Records, 1811–31. During Rush’s lifetime, inebriates were most often taken to the Philadelphia Almshouse.
22Hayward 1818, pp. 33–4.
23Pennsylvania Society for Discouraging the Use of Ardent Spirits 1831, p. 68.
24Three works appeared in 1813 that contemporary doctors cited as being the first descriptions of delirium tremens: Samuel Pearson’s ‘Observations on Brain Fever’, and J. Armstrong, ‘On the Brain Fever Produced by Intoxication’, both published in the Edinburgh Medical and Surgical Journal, and Thomas Sutton’s Tracts on Delirium Tremens. Armstrong also published a longer essay on the subject in his influential work on typhus fever; Armstrong 1816. Although not published in Philadelphia until 1821, Armstrong’s book was circulating in America no later than 1818; Pennsylvania Hospital 1818.
25In-patient records and medical literature, ‘mania a potu’ and ‘delirium tremens’ were the most commonly used terms for alcoholic insanity. ‘Intemperance’ was a much looser diagnosis used in cases of intoxication and referred more generally to a patient’s habits and overall health.
appropriate course of treatment. Klapp became a prominent doctor and popular teacher in the city, in large part through his writing on delirium tremens.

A majority of eighteenth-century doctors had accepted that heavy drinking could lead to different forms of insanity. Rush wrote that ardent spirits were to blame for one-third of the lunatics confined at the Pennsylvania Hospital. But alcoholic insanity was not separated from other disorders in patient records or in Rush’s thought. In an 1811 dissertation, for instance, a student of Rush listed the principle causes of mania as, ‘hereditary predisposition; abuse of spirituous liquors; violent and stimulating passions of the mind; abstruse study; unlimited exercise of the faculties; tumors compressing the brain’. But treatment strategies for mania were not dependent on the cause of the affliction. These patients were categorised and treated as lunatics, not inebriates. The description of delirium tremens, by contrast, isolated the condition as a form of alcoholic insanity distinct from other types of mania, ‘phrenzy’ or delirium. Doctors based this distinction on the disease’s primary cause—heavy, habitual drinking. As one student put it, ‘The cause of delirium tremens is better understood than that of almost any other disease.’ With the appearance of delirium tremens as a new category of disease, the drunkard also became a newly distinct object of medical knowledge—a body uniquely formed by repeated alcoholic stimulation.

Doctors’ narratives of delirium tremens pictured a disease that was both horrible and fascinating. Acute insomnia, nausea, vomiting and constipation marked the onset. Patients trembled uncontrollably, their faces became wild, and they were overcome with paranoia, often pulling at their clothes, convinced that mice or vermin were crawling on them. Over the course of several days, these symptoms built into a violent delirium. Patients succumbed to a range of hallucinations and delusions that could last anything between several days to a month. Eventually, in most cases, patients collapsed into a long sleep and woke up in full control of their faculties. In acute cases, violent epileptic seizures and a rising crescendo of insanity led to death. Detailed descriptions of phantoms, delusions and horror permeated doctors’ narratives.

The new delirium tremens diagnosis quickly garnered widespread acceptance. After 1817, Philadelphia medical journals published a string of essays on the disease. Professors

26The first published American essay on delirium tremens appeared in 1815, and was written by a resident physician at the Philadelphia almshouse, Isaac Snowden. In 1827, Benjamin H. Coates claimed that Snowden wrote his article without knowledge of the articles published in England. However, the medical library at the Philadelphia Almshouse contained copies of the Edinburgh Medical and Surgical Journal prior to 1813. That Snowden’s description follows the British authors so closely suggests that he was aware of their writing; Snowden 1815; Coates 1827; Guardians of the Poor, Board of Physicians, Minutes, 1809–45, Philadelphia City Archives.

27Klapp 1817; Klapp 1818; Klapp, note to J. Rush, c. 1817, Pennsylvania Historical Society.


29Lee 1811.

30Boude 1857.

31Patients suffering from delirium tremens were often seen as inappropriate for the new mental asylums being built in the early nineteenth century, organised around forms of ‘moral therapy’, most likely because of the violent nature of the disease. At the Philadelphia Hospital for the Insane, Thomas Kirkbride made clear that cases of mania a potu would not be admitted to the new asylum; Kirkbride 1841, pp. 19–20.
lectured on the subject at the University of Pennsylvania, and students wrote numerous dissertations on the disease in the 1820s and 1830s. After 1821, ‘mania à potu’ appeared throughout the records of Philadelphia’s medical institutions, including the almshouse, the Arch Street Prison, the dispensaries and the Board of Health. Delirium tremens first appears in the records of the Pennsylvania Hospital in 1817, and in 1824 the diagnosis became a separate category—along with dysentery and pneumonia, for example—in the hospital’s annual accounting of cases admitted. Delirium tremens was a relatively common occurrence at the hospital. In 1827–8, admittance records documented 34 cases, compared to, for example, 46 infants ‘born in house’, 22 cases of pneumonia and 63 broken bones. The delirium tremens diagnosis spread throughout the United States in the 1820s, and an extensive medical literature on the condition grew up prior to 1860.

Poverty, Medicine and the New Middle Class
Delirium tremens changed the way in which doctors classified alcoholic insanity, but the delirium tremens diagnosis did not generate a cure for the disease or even a uniform method of treatment. Klapp’s cure was very influential at the almshouse for about ten years, but a wide range of treatment strategies continued to be employed throughout the city. Why, then, did delirium tremens become such a widely accepted diagnosis?

Medical interest in the condition coincided with a growing concern with the more general problem of alcohol abuse, or ‘intemperance’. After a particularly harsh winter in 1817, a rapidly growing almshouse population and widespread dissatisfaction with the administration of the city’s poor relief agencies led prominent Philadelphians increasingly to point to intemperance as an explanation for poverty. Completed in 1817, the first systematic study of the roots of poverty in Philadelphia, the Report of the Library Committee of the Pennsylvania Society for the Promotion of Public Economy, acknowledged that, for wage labourers, work was not always readily available. During the winter in particular, ‘there is considerably more than can obtain employment’. Despite these arresting findings, the committee concluded that ‘idleness, intemperance, and sickness’ were the principal causes of poverty. One respondent wrote, ‘the use of ardent spirits is probably in nine cases out of ten the cause of poverty’.

The depression that followed the Panic of 1819 only hardened these attitudes. At its height, three out of four Philadelphian workers were idle and 1,808 in jail for unpaid debts. The economic catastrophe struck Philadelphia’s nascent middle class of manufacturers as hard as any group, as their economic fortunes had been tied into the fragile banking system. Newspaper correspondents struggled to come to terms with the

32‘Chapman’s Notes’, Lecture notes from Nathaniel Chapman’s course at the University of Pennsylvania, c. 1820, p. 247; The College of Physicians of Philadelphia.
33Pennsylvania Hospital, Patient Admittance Records, 1811–31.
35Pennsylvania Society for Promotion of Public Economy, 1817, p. 20.
36Ibid., p. 17; Dorsey 2002, p. 58.
devastation, asking, ‘Do we not see ruin, and misery and want, preface every rank of private life?’ 38 Another wrote, ‘Men whose honor is proverbial, and whose credit stood as high as any in the world, are prostrated and bankrupt, and the affliction pervades every avenue of society’. 39 Even after the economy began to recover in 1822, the gap between rich and poor continued to widen, transforming the social fabric of the city. 40

The medical community’s concern with alcohol abuse deepened during these years. Many doctors felt that liquor had the power to overwhelm the moral integrity of the individual, undermine social stability and threaten the nation’s democratic institutions. In a Philadelphia medical journal, Samuel Emlem urged his fellow doctors to live up to their unique obligations:

We are under a two-fold obligation to hold up to view [liquor’s] awfully desolating effects; as physicians, bound to watch over the public health, and as good citizens, bound to promote virtue, and discourage vice. The preservation of the lives and morals of millions ... if not the stability and duration of the government under which we live, may depend upon our efforts. 41

In the 1820s, these concerns also suffused the literature on delirium tremens as doctors repeatedly associated the disease not specifically with poverty, but with economic misfortune. As one student wrote, the disease ‘is said to be most commonly met with among those who have once enjoyed the comforts and luxuries of life’. 42 While prominent Philadelphians increasingly stigmatised the poor as intemperate, doctors writing on delirium tremens professed their primary concern to be the threat delirium tremens posed to ‘individuals of cultivated minds, lofty sentiments, and glittering prospects’. 43 To elite Philadelphia doctors and their young, upwardly mobile students, delirium tremens epitomised the loss of individual volition that characterised habitual drinking and represented the most horrible of consequences. Despite the dire results, these writers lamented, inebriates continued to make the irrational choice to drink. ‘It is indeed a cause of regret to see so many ... prostitute the most splendid talents ... at a shrine so detestable and debasing.’ 44

As a new middle class was forming in Philadelphia, therefore, ardent spirits became a repository for anxieties not just over the intractable nature of poverty, but also the fragile nature of economic status. If the optimism that prevailed after the War of 1812 promised unbounded opportunity, the Panic of 1819 demonstrated that poverty threatened everyone. As Edward Balleisin has argued, while the new middle class constituted itself around the cult of the self-made man, a tension grew between the cultural value placed on economic independence and the widespread experience of bankruptcy. 45 While the middle

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38 The Aurora General Advertiser, 19 May 1819.
39 The Aurora General Advertiser, 20 May 1819.
41 Emlem 1827, p. 276.
42 Griffin 1826, pp. 1–2.
43 Davis 1827, p. 1.
44 Randolph 1824, p. 1.
class increasingly cited intemperance as an explanation for poverty, delirium tremens captured the fragile nature of their own economic status in a context of increasing social fluidity.

Given these anxieties, the question persisted—why do inebriates continue to drink despite the consequences? Doctors increasingly turned to this question in their investigations. The description of delerium tremens derived from new systems of classification and methods of scientific investigation. In the early nineteenth century, doctors increasingly rejected the grand, abstract theories that characterised medical education in eighteenth-century Edinburgh, drawing instead on tangible, empirical observation to shape treatment strategies. For example, the British doctor, Samuel Pearson, in one of the first descriptions of delirium tremens, began by declaring his independence from the great medical thinkers of the day:

Multifarious and repugnant theories on the science of life still continue to agitate the medical world. . . . A medical review will convince anyone how the faculty worry each other . . . about their different dogmas, with much injury to themselves and patients. For the above reasons I disavow all theory, and briefly state the circumstances as they occurred to me at the patient's bed-side.47

Central to this intellectual shift was the rise of the science of anatomy, as doctors sought to verify visually the signs of disease in the bodies of their deceased patients. American doctors publicised their anatomical knowledge through public demonstrations and lectures, as anatomy also became an important strategy for physicians to construct a new professional prestige. The practice of cutting up dead bodies, however, violated cultural norms and elicited popular revulsion. Citing, among other things, the skeleton in the doctor's office that became iconic in the early nineteenth century, Michael Sappol has argued that doctors used anatomy to construct a death cult infused with magical authority: 'Anatomy's “charm” lay in the production of a distinctive professional charisma, a command over the body, that deliberately transgressed the boundaries between life and death.'48

Physicians based the classification of delirium tremens on the reasoning that repeated intoxication diseased the internal organs. Citing physiological evidence, such as inflammation of the stomach and 'effusions of serum in the brain', doctors theorised that physical changes wrought by alcohol caused the disease. Doctors also began to speculate that repeated intoxication actually habituated the body to narcotic stimulation. Synthesising the growing secondary literature on delirium tremens, Benjamin Coates in 1827 crystallized a conception of what is now termed physical addiction and withdrawal. Coates argued that, 'the known operation of spirituous liquors, and of opium, on the great organs of the human body, consists in an excitement of the circulation, accompanied by a depression of the cerebral functions'. As the narcotic is repeatedly applied to the system the body becomes habituated: ‘the well known accommodating power of the

47Pearson 1813, pp. 326–32.
system accustoms it to bear the unwholesome agent with comparative impunity.’ Coates continued:

The patient is suddenly interrupted in a long continued course of hard drinking. What is then the consequence? ... the system immediately feels the want of its accustomed narcotic. It has been gradually changed, until the depressing agent has become necessary to the preservation of an approach towards health; without it ... his cerebral and nervous systems are thrown into a state of the very highest excitement.49

Citing physiological evidence, doctors now theorised that habitual, heavy drinking diseased the internal organs, rendering the body itself incapable of moral self-government. Dissection enabled doctors to transmute the abstract philosophical concerns of Rush’s malady of the will into a physiological discourse in which the habit of intemperance became visible in the diseased organs of the inebriate. The language of anatomy further enabled physicians to assert a privileged knowledge of the nature of habitual drinking as they sought to respond to a pressing social issue. The investigation of delirium tremens, then, led to an anatomy of intemperance that would shape later nineteenth-century medical thinking on addiction.50

The descent into the cavities of inebriates’ bodies, however, did not disenchant intemperance. On the contrary, the medical literature on delirium tremens combined the anatomical report on the inebriate with graphic accounts of supernatural horror. Journal articles and dissertations often began with declarations of unwavering devotion to rigorous empirical observation, and then went on to relate case histories that read like ghost stories. Samuel Pearson, in the essay quoted above, related that phantoms relentlessly haunted a patient, accusing him of having committed a murder 20 years earlier. The man regained his sanity only after travelling the 15 miles to the gravesite of the victim.51

From its first description, doctors identified the disease based on the confirmation of intemperate habits and descriptions of horrible nightmares. Narrative accounts varied widely, from extended ‘reveries’, in which patients were participants in involved and intricate delusions, such as the case of a man who believed he was on an American naval vessel under attack by a French privateer, to brief mentions of phantoms or vermin.52 Accounts dwelt on the pronounced terror experienced by patients.53 Rats, snakes, birds, wild beasts, armed soldiers, balls of fire, devils and in one case a cow standing on its hind legs pursued these unfortunate patients. One doctor’s description could be applied to most: ‘visions were constantly floating before his diseased imagination representing death, under every shape, with complicated horrors.’54

The horrors of delirium tremens were not limited to published accounts in medical journals. Nathaniel Chapman included fanciful descriptions in his lectures at the University of

49 Coates 1827, pp. 48–9.
50 See, for instance, Sewall 1841.
51 Pearson 1813, p. 330.
52 Drake 1819, p. 60.
53 Brown 1822, p. 208.
54 Nancrede 1818, p. 480.
Pennsylvania in the 1820s, and students filled their dissertations with supernatural creatures and violent insanity.\textsuperscript{55} One student, writing in 1824, typified the narratives that circulated at the medical school:

Frequently these imaginations are filled with objects of dread and horror, [such] as monsters or evil spirits, whose intentions they suppose are to destroy or carry them off to a place of torment. Again, they fancy they hear strange noises in some corner of their own, or in an adjoining room, [such] as the sound of dying persons. Or that they see spots of various colours, or balls of fire floating through the atmosphere.\textsuperscript{56}

Stories of apparitions in the literature on delirium tremens appeared in a broader context of scientific and popular interest in the problem of supernatural phenomena. Medical treatises on insanity argued that apparitions were in fact hallucinations, products of a diseased mind, drawn from memories that had sunk below immediate consciousness.\textsuperscript{57} After 1809, Rush included ‘Phantasms in the Mind’ as a topic in his medical lectures, attributing them to ‘false representations of things on the eyes and ears. . . . No more happens here than when pain is excited in the urethra from a stone in the bladder’.\textsuperscript{58}

While Rush seemed to be purposively trying to discourage interest in phantasms among his students, the early nineteenth century witnessed a broad curiosity in the connection between diseased perception, irrational compulsions and supernatural phenomenon. Gothic fiction, for example, was widely popular in England and America during this period and, for some authors, the exploration of dark, irrational themes was a self-conscious attempt to resist the dry rationalism of eighteenth-century culture and revive the power of fantasy.\textsuperscript{59} In 1798 the Philadelphia author, Charles Brockden Brown, explored the limits of Lockean psychology in his novel \textit{Wieland}, the story of a loving father driven by disembodied voices to murder his family. The narrative turns on the question of whether the father’s insanity derives from natural or supernatural causes.\textsuperscript{60}

Similar themes were also explored through phantasmagoria. A staple of antebellum Philadelphia, theatrical entertainment shows consisted of optical illusions created by a newly invented lantern that projected images of ghosts, devils and other objects of horror.\textsuperscript{61} First presented in Philadelphia by Rubens Peale at the Philadelphia Museum in 1809, the shows were designed to highlight the fallibility of human perception.\textsuperscript{62} Billed as ‘experiments in natural philosophy’, performances began with presentations of the arguments of Enlightenment doctors and philosophers refuting the existence of spectres—proving them scientifically to be no more than products of the mind. Rubens
Peale advertised his phantasmagoria as ‘intended to enlighten and guard people against certain superstitious ideas they may have imbibed respecting witches and wizzards [sic], which, in past ages, have kept the human mind in fetters’. These arguments, however, combined with the convincing reality of the apparitions that appeared during the show, only served to highlight the question of the existence of phantoms.

At the same time, a number of treatises on the subject of apparitions appeared, written by doctors for both a scientific and broader popular audience. The most exhaustive of these works was Samuel Hibbert’s *Sketches of the Philosophy of Apparitions* (1824). Hibbert’s treatise began with his disavowal of all belief in apparitions: ‘Apparitions are likewise considered as nothing more than ideas or the recollected images of the mind, which have been rendered more vivid than actual impressions.’ The first section of the book went on to address many of the physical and mental afflictions that Hibbert argued caused ghost sightings. The bulk of the treatise, however, consisted of detailed accounts of demons, fairies, elves, spirits of the departed and all other manner of supernatural phenomena. Similar to the structure of the phantasmagoria shows, Hibbert’s assertions that he sought scientific explanations only served to heighten the allure of his descriptions.

The medical literature on delirium tremens and the new literature on the science of apparitions appeared simultaneously and were deeply intertwined. Doctors writing on delirium tremens cited works on apparitions as offering illustrative case histories and, in turn, works on apparitions often cited the new disease of delirium tremens as an explanation for sightings of supernatural beings. The fascination with the supernatural and diseased perception evident in works on apparitions is also clearly present in the literature on delirium tremens. In one essay, for example, Dr Daniel Drake interrupts relating a case history to describe: ‘a paroxysm of reverie, so interesting in its character, that . . . I flatter myself you will be amused with its history.’ The rapid acceptance of the delirium tremens disease model in the Philadelphia medical community, therefore, must be attributed in part to the broad popular fascination with the supernatural.

But accounts of the condition reported both fascination and horror, and many descriptions of the nightmare world of delirium tremens clearly expressed physicians’ broader concerns with the threat alcohol posed to individual volition. The case history of a Mr R., published in a Philadelphia medical journal, read:

his eyes looked wild. . . . He soon pointed across the room, looking very earnestly, saying to his son, ‘Don’t you see them? Don’t you see them? There they are again!’ I asked him what it was he saw? He answered, *mice*, which had come to eat his library; he said they had already greased and spoiled his most valuable books and that he had sustained one hundred dollars damage by them. No

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63 *Aurora General Advertiser*, 13 January 1809.
64 Hibbert 1975, p. iii.
65 Hibbert cites delirium tremens often to explain supernatural occurrences; Hibbert 1975, pp. 113, 134, 167, 294.
66 In 1827, Coates cited J. Alderson’s article, ‘On Apparitions’, published in the *Edinburgh Medical and Surgical Journal* (1810) as one of the earliest descriptions of delirium tremens. Coates also cites Hibbert’s book in the same essay, Coates 1827; Alderson 1810; Hibbert 1975.
67 Drake 1819, p. 61.
circumstance of the kind had taken place. His wife informed me that he had been thus deranged four days... I knew this man had been addicted to a free use of spirituous drink for two years.68

Horrid vermin crawled out of the dark recesses of Mr R.'s diseased imagination to despoil the most valuable objects of his library, perhaps the ultimate symbol of intellectual integrity and social respectability. Reflecting doctors' concerns with the threat liquor posed to individual psychology, here and elsewhere accounts vividly portrayed supernatural horrors lurking just beyond the fragile walls of middle-class selfhood, walls that spirituous liquors threatened to dissolve.

Having rejected the abstract Enlightenment theories of Rush's disease of the will, doctors sought psychological certainties through a newly rigorous empirical examination of the body's interior. But there they found an amoral landscape of diseased organs. The demons of delirium tremens embodied the violent unreason that doctors now had no philosophical framework for interpreting. Rather than conquering the violent insanity of habitual inebriety, doctors illuminated a mental world of the inebriate that was far more disturbing than anything Rush had described. All habitual drinkers now hovered between a tenuous hold on reason and a dark nightmare world.

In the medical literature on delirium tremens, therefore, the Enlightenment view of the self as fragile and tenuous found renewed expression in fears over the fragility of personal volition in a volatile market society. Doctors' stories of violent insanity and supernatural visions resonated with a deep-seated sense of personal vulnerability born of the social upheaval and economic dislocations that shaped the experience of the emerging middle class in Philadelphia.

Conclusion

Philadelphia doctors deeply influenced the temperance movement in Pennsylvania in the 1820s.69 In temperance tracts and public lectures, doctors dramatised their new medical theories, detailing hair-raising tales of the horrors of delirium tremens, publishing lurid, colour engravings of inebriates' dissected stomachs, and even relating case histories of spontaneous combustion brought on by long-term habitual drinking.70 As a result, in temperance literature, physicians enlisted the demons of their patients' hallucinations to patrol the outer, psychic frontier of an Enlightenment rationality they feared was under siege by the unreason of alcohol abuse. As illustrated in 'Metzengerstein,' by 1832 these demons had escaped their physician-keepers and entered the American cultural imagination.

While the story is a fantasy set in an ancient Hungarian land, its unsettling effect is created by the four days of debauchery that precede the ghost-horse coming alive in the wall tapestry. With accounts of delirium tremens circulating widely, Poe offers a

69Doctors made up 11 of the 36 managers of the statewide organisation; Nissenbaum 1980, pp. 74–6; Sewall 1830; Mussey 1835; B. H. Coates, ‘Address to the Annual Meeting of the Pennsylvania Society for Discouraging the Use of Ardent Spirits 22 February 1830’, Coates Reynell Collection, Pennsylvania Historical Society.
70Sewall 1841; Lair 1812; Lair was also reprinted in Drake's A Discourse on Intemperance (1828), and by Trotter in his essay on drunkenness.
rational explanation for what also appears supernatural. The apparition, however, is not the only supernatural element to the story. As in the medical literature on delirium tremens, the Baron's self-destructive compulsion also defies rational explanation, as observers note, for example, that ‘an unearthly and portentous character to the mania of the rider’. As the pair charge into the conflagration, the ‘agony’ of the rider’s countenance and emphasis on the ‘intensity of terror’ only strengthens the story’s link with the medical literature on delirium tremens. Further, the mysterious fire clearly suggests the accounts of the spontaneous combustion of drunkards recently circulated by doctors in temperance literature. The existence, then, of explanations sanctioned by medicine and science for the extraordinary events of the story leaves the reader unsure whether to ascribe a natural or supernatural explanation to the demon horse and the rider’s ‘unearthly’ mania.

At the heart of ‘Metzengerstein’ is a concern with the problem of individual volition and irrational compulsions that had troubled the Philadelphia medical community since Rush. Intoxicated by the power of the ‘ferocious and demon-like’ animal, the Baron rides with a hideous fervour, struggling to impose his will on the evil beast, which has its own dark purpose. Desire, loathing and ecstasy mingle in the Baron’s obsession. One of his servants, ‘whose opinions were of the least possible importance’, Poe tells us, ‘had the effrontery to assert that his master never vaulted into the saddle, without an unaccountable and almost imperceptible shudder’, but that ‘upon his return from every habitual ride . . . an expression of triumphant malignity distorted every muscle in his countenance’. The homoerotic image of the Baron day and night being ‘riveted to the saddle’ of the reincarnation of his dead enemy only heightens the perverse and violent nature of the struggle for dominance between man and demon. Ultimately, and perhaps inevitably, the young Baron succumbs, and in the final race towards the fire, ‘the career of the horseman was indisputably . . . uncontrollable’.

The rational, scientific investigation of delirium tremens and the habit of intemperance, therefore, gave rise to a literature that explored the dark allure of the irrational. As the realm of the diseased imagination became a space of fantastic speculation, the nineteenth-century addict became the young Baron Metzengerstein, inhabiting dark, magical realms, an agent of destruction, constantly threatened with self-destruction. The horse carries the Baron to his death, but, far from eliciting pity, the sight of the final, desperate struggle leaves the crowd of onlookers in awe and wonder. As the horse and rider disappear into the burning castle:

A dead calm suddenly succeeded. A white flame still enveloped the building like a shroud, and, streaming far away into the quiet atmosphere, shot forth a glare of preternatural light; while a cloud of wreathing smoke settled heavily over the battlements, and slowly, but distinctly assumed the appearance of a motionless and colossal horse.

Poe 1983, p. 84.
Suggestively, Poe’s older brother Henry was a terrible alcoholic. He died in 1831, months before ‘Metzengerstein’ was published, of what medical records recorded as ‘intemperance’. Poe himself probably died suffering from delirium tremens; Silverman 1991, pp. 83–5, 414–18, 433–7.
Here, then, was the ironic consequence of doctors’ fascination with delirium tremens. In enlisting the demons of addiction to patrol the boundaries of the empire of reason, doctors created an outside-realm that promised a release from the domination of Enlightenment rationalism, even if that realm was also inhabited by grave risks.

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