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Corrupting the body and mind: distilled spirits, drunkenness and disease in early modern England and the British Atlantic world

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In 1545 the anonymous author of *An Inuectiue ageinst Glotony and Dronkennes* lamented that drinking ‘empoysoned the bodie’, wounding ‘mortally both the Body and Soule’.¹ Supported by the title’s concern with excessive eating and drinking, this statement situated drunkenness within long-standing beliefs linking intoxication with the loss of appetite control and poor health. Early modern English vernacular health guides, which recapitulated learned medical theories about health and disease for popular audiences, applied the Galenic concept of non-naturals to constitute drunkenness as the result of excessive consumption, an aberration of natural behaviours such as eating and drinking, that destroyed the constitution and brought about chronic diseases.²

During the eighteenth century, a new medical paradigm emerged, a material vision of the fibre body as a mechanical, hydraulic machine. This theory provided a conceptual framework that medical writers used to materialise distilled spirits as poisonous substances that exerted a deleterious agency upon the body and mind by mechanically altering healthy fibrous tension. Where sixteenth- and seventeenth-century authors focused on the ill effects of excessive drinking, eighteenth-century medical materialists focused a new attention on the effects of the liquors themselves. Circulating in the English Atlantic world, these new medical understandings of intoxication pathologised drunkenness and distilled spirits and, by the early nineteenth century, alcohol. Although the drunkard remained a loathsome and pitiful character, he was no longer solely to blame

for his diseases. Distilled spirits, taken initially by choice, eventually degraded the drinker's physical ability to resist.

The historiography of alcoholism is characterised by a quest to locate the historical origins of modern addiction concepts, the formation of which represents a medicalisation of drunkenness from sin to disease.³ Medicalisation, as defined by the sociologist Peter Conrad, is 'a process by which nonmedical problems become defined and treated as medical problems'.⁴ Led by Harry Levine, many scholars initially credited Benjamin Rush (1746–1813), an early American physician, with discovering addiction.⁵ Reacting against this American exceptionalist interpretation, the British and Canadian historians Roy Porter, Jessica Warner and, more recently, James Nicholls argued that the concept of addiction has an early modern, European genesis.⁶ Although the 'medical writers of Georgian England' understood 'that heavy alcohol consumption was often responsible for ill-health and disease, and ... was one of the triggers of madness', Porter wondered, 'was habitual drunkenness itself seen as a disease?'⁷ Whether they located its origins in the early modern period or at the turn of the nineteenth century, these scholars did not question the existence of addiction as an ontological, medically definable pathology.

Since 2000, cultural and linguistic studies have demonstrated that 'alcoholism' and 'addiction' are modern concepts that did not enter common usage until the turn of the twentieth century, both in the UK and in the USA.⁸ Consequently, early modernists like Phil Withington and a constellation of scholars including David Clemis are leaving behind rhetorically burdened concepts like drugs and addiction to focus instead on 'intoxication', a concept that 'invites consideration of all consumptive experiences and practices involving intoxicants'.⁹ The realisation that alcoholism is a modern socio-medical construction, not an ontological entity waiting to be discovered, has inspired some renewed interest in the language of addiction and its medical framings in the early modern period.¹⁰ However, research focused on early modern medical understandings of intoxication remains sparse in comparison to the attention devoted to drinking, temperance and prohibition in the nineteenth and twentieth centuries.¹¹

Moreover, the medicalisation of compulsive drinking from sin to disease remains centre stage. Clemis, for example, works to

locate the formation of distinctly ‘medical expertise with respect to chronic drinking’, which he argues did ‘indeed [emerge] later in the eighteenth century’ only after new developments in ‘neurological theory ... encouraged chronic drinking to be approached without reference to moral agency and the language of sin and vice’.¹² But Clemis also points out ‘that the moral and the medical were not’ easily ‘distinguished’ during the seventeenth and eighteenth centuries, an outcome of ‘wider ideas’ developed by theologians, clergymen and other intellectuals who ‘did not readily disentangle the body, mind and soul’.¹³ In a period in which modern professional boundaries between physicians, clergymen and other popular health writers were not yet drawn, physicians often acted as moralists while clergymen practised or wrote about medicine. I argue that the ways in which early modern writers understood the effects of the drink itself challenges Clemis’s conclusion ‘that discussion of purely medical aspects of drunkenness and habitual drinking could never be seen as determining the moral agency of the drunkard’.¹⁴

I work to close the enduring gap between the medical and the moral in early modern addiction studies by anchoring this analysis within another vein of recent intoxication scholarship that situates drinking as a component of sociability within an emerging eighteenth-century public sphere.¹⁵ Just as the consumption of intoxicants was a public activity, so too was the circulation of ideas, including medical ones, about the dangers of drinking. Therefore, in this chapter, I study popular health guides aimed at the reading public as well as medical treatises, which were produced by physicians for physicians. Read together, these sources reveal that compulsive drinking had acquired a distinctly medical dimension before the turn of the nineteenth century even if it was also regarded as a moral failure. And during the second half of the eighteenth century, medical understandings of distilled spirits circulated in the British Atlantic world, where they would inspire early American temperance reformers in the early nineteenth century.

I also examine changing medical characterisations of the intoxicant as well as the intoxication it produces. Until the last decades of the eighteenth century, Clemis writes, ‘the problem of why alcohol produced certain behaviour’ or ‘how drinking became habitual’ was dealt with by ‘moralists, clergy, and occasionally, jurists,

but seldom physicians', who had failed to 'provide a compelling explanation of why people became chronic drinkers'.¹⁶ However, popular health guides produced between the sixteenth and eighteenth centuries tell a different story. Written by physicians, clergymen and learned non-specialists, these health guides reveal an early interest in the effects of the drink itself, which was explained in terms of prevailing medical theory. Before mechanical medicine, the effects of drinks like wine, including its capacity to rob men of their reason and agency, were described in terms of humoral medicine. As distilled liquors became commonly used commodities, their destructive effects were explained in iatromechanical terms that dominated eighteenth-century medical theory.

Moving beyond the quest to locate an early modern medicalisation of alcohol addiction, I argue that an intersection of medical, religious and popular writers pathologised drunkenness by focusing on the injurious physical effects of the drink. The pathologisation of distilled spirits and, later, all forms of alcohol as physical poisons underpinned the configuration of compulsive drinking as an aberration of health even if it was not fully recognised or treated as a disease and laid the conceptual foundations for modern medical understandings of alcoholism.

Intoxication and popular medical knowledge, c. 1500–1700

In the early modern period, medical explanations of drunkenness and its negative physical consequences appeared most often in vernacular health guides, a genre of popular medical literature that exploded in England during the sixteenth and seventeenth centuries. Elizabeth Lane Furdell explains that 'Printers, publishers, and booksellers' became specialists 'in medical works', joining learned and irregular practitioners alike in England's diverse, and often fractious, medical marketplace and transforming 'health care literature into a genre unto itself'.¹⁷ The production of health guides generated further 'public demand for ever more information, discussion, and advice about sickness and well-being'.¹⁸ More importantly, this growing genre was printed in vernacular English, which made it accessible by any literate person who could get a copy of the

book. The number of medical texts available to the lay public dramatically expanded from the sixteenth century onwards. According to Andrew Wear, such health guides transmitted long-standing learned concepts of preventative medicine to ‘readers who were then expected to apply it themselves’.¹⁹

Vernacular health guides and learned medical texts alike emphasised Galenic understandings of the body, which had changed little since late Antiquity.²⁰ Wear writes that early modern medical literature organised ‘most aspects of life’ according to the concept of ‘the six non-naturals’, which had become ‘canonical categories around which advice on the preservation of health was based’.²¹ First described by the second-century Greco-Roman physician Galen in *Ars medicina*, the six non-naturals included ‘(1) air, (2) food and drink, (3) sleep and waking, (4) movement and rest, (5) retention and evacuation including sexual activity, and (6) the passions of the soul or the emotions’.²² In early modern health guides, the first two non-naturals became the most important determinants of health, with special emphasis on diet.²³ It was in this category that drinking and drunkenness fell. Because non-naturals like eating and drinking were factors over which an individual ostensibly had control, early modern English preventative medicine continued to assign moral meaning to health. Abuse of the non-naturals was a sin against the natural laws of life, made manifest by the chronic diseases that resulted. Linking the state of the body to whether a person engaged in right living associated disease with sin, while health represented a person’s goodness. As a result, the medical descriptions of intoxication acquired a distinctly moral tone, blurring the boundary between sin and disease and complicating historiographical narratives about the medicalisation of excessive drinking into addiction.²⁴

Before the emergence of psychiatry as a medical speciality during the nineteenth century, the popular health guides genre developed at a time when English society paid increased attention to the maladies of the mind and their bodily causes. Even though asylums such as Bethlem Hospital date back to the fifteenth century, according to historians like Roy Porter, psychiatry did not come ‘of professional age’ until the mid-nineteenth century, ‘when medical superintendents (“alienists”) banded together to form specialized

organizations'.²⁵ Nevertheless, mental afflictions, which had traditionally been associated with spiritual deviance or disturbance, were increasingly viewed within the context of health and medicine, a trend exemplified by Robert Burton's immensely popular *Anatomy of Melancholy* (1621). For Burton (1577–1640), mental afflictions like folly, madness and melancholy were conditions of the body as well as of the mind, rooted in the prevailing Galenic physiology.²⁶ A little over a century later, the elite physician and popular health writer George Cheyne (1671–1743) continued this tradition with the popular *The English Malady* (1733), in which he argued that mental affliction was a problem to which English people were especially prone.²⁷

For most of the sixteenth and seventeenth centuries, before the democratisation of distillation and the commodification of its products, only fermented beverages like wine, beer, ale and cider (in all their varieties) appeared as subjects of discussion in health guides. While most health writers agreed that clean water was the most healthful thirst quencher, fermented beverages such as wine, beer and ale were regarded as both nutritive and medicinal. What drew health writers' ire was that these drinks had become the subject of popular consumption, a context that invited overuse. It was excessive drinking, intemperance in its classical definition, anything immoderate that imbalanced the humours, that they believed was harmful to the body. Acknowledging its health benefits when used moderately and under medical direction, the physician William Bullein (1515–1576) wrote that when 'dronken with excesse', wine 'is a poyson mooste venemous'.²⁸ Another health writer, Henry Wingfield, a Puritan minister, explained that 'wyne drunke superfluouse doth hurte the liuer, the brayne, and the senewes', causing 'crampes, palseies, apoplexies, & oftentimes ... sodayne death'. Moreover, the bodily harm caused by too much wine also debilitated the drinker's mind. 'Drunkennes' induced 'a grosse and thicke fume' that, ascending to the 'brayne', debilitated mental function by covering 'the places where reason and memorie lyeth'.²⁹ These forms of early modern medical knowledge about drunkenness were often reproduced in a growing literature of sixteenth- and seventeenth-century treatises dedicated solely to drunkenness.³⁰

The connection between drunkenness, degraded constitutions and chronic disease was even more clearly articulated by the end of the seventeenth century. The influential physician Thomas Sydenham (1624–1689) described how improper habits of life affected the body. Although he broke from the medical establishment of his day, Sydenham's explanation of the link between drunkenness and chronic disease nevertheless reflected enduring Galenic understandings of the body. Chronic diseases like gout were caused by poorly digested morbid matter that accumulated, slowly poisoning the body. '[C]ontinual Errors in the ... Non-naturals, especially in Meat and Drink' caused 'indigestion of the Humours', leading to a host of 'Chronical Diseases' such as gout, dropsy and rheumatism. Moreover, 'Surfeiting and Drunkenness', along with a sedentary mode of life, wore the body out, 'subvert[ing]' and 'destroy[ing]' its constitution, which began as a 'pristine and natural Oeconomy of the Body'.³¹ Unlike the health guides of the preceding centuries, Sydenham's detailed discussion about how lifestyle could induce debilitating chronic diseases would shape growing social concerns about drinking in England.

While Sydenham's understanding of drunkenness was buried in his broader discussion of chronic diseases like gout, one of his contemporaries, Everard Maynwaringe (1629–1713), applied this medical knowledge directly to the medical problems of drunkenness.³² Demonstrating their growing status as objects of commercial consumption, Maynwaringe now included distilled products like brandy, whisky and aquavit alongside traditional beverages like wine. Warning that distilled drinks were rapidly becoming 'in fashion', Maynwaringe warned his readers that they were 'pernicious Drinks to use commonly', destructive to 'Health, and opposite to long Life'.³³ Reflecting on the medical consequences of drunkenness regardless of the beverage that induced it, Maynwaringe acknowledged that while getting drunk was not fatal, it was the establishment of a habit or lifestyle of drinking that slowly harmed and killed the drinker. Outside medicinal use prescribed by a physician, 'Drink exceeding its measure to excess; is no longer a refreshment', but a 'degenerate condition ... of *body* and *mind*' – so much so, Maynwaringe argued, that no 'difference' could be found between '*sickness* and *drunkenness*', for 'Drunkenness'

had 'all the requisites to constitute a Disease'. The inability of the 'faculties' of the body and mind to perform their 'free and regular functions' after drinking constituted the '*symptoms and diagnostick signs*, of an acute Disease'.³⁴ While drunkenness was frequently compared to disease in a metaphorical sense in sixteenth- and seventeenth-century sermons and pamphlets, Maynwaringe's statement is one of the earliest articulations of the idea that drinking too much could be a disease.

Like Sydenham, Maynwaringe understood that the 'degenerate Chyle' created by drinking too much 'do accumulate', laying 'the foundation of many *chronick diseases*' that 'subvert the aeconomy and government of humane Nature' and 'ruine the Fabrick of mans body'. Maynwaring divided the 'ill effects' of drunkenness into three categories. First, the excessive use of intoxicating beverages disordered the '*natural tone of the stomach*', which in turn deranged its ability to digest food properly. Second, Maynwaring argued that, if this was repeated for long enough, digestive ability could be permanently destroyed. Too much 'degenerate Chyle ... produced' by improper digestion conferred upon the body an '*unwholesome corpulency*' and '*catchectick plenitude*'.³⁵ Finally, 'intemperate drinking' draws the 'whole body' into a '*degenerate state*', characterised finally by an '*imbecility of the Nerves*'.³⁶

By describing drunkenness as a disease in the literal sense, Maynwaringe presaged the growing focus on the substance causing intoxication, the intoxicant, that would come to define medical discourses about drunkenness during the eighteenth century. 'Drunkenness being a Raging Distemper' was 'denominated and distinguished from other sicknesses' because it had an obvious material cause, '*Drink*'.³⁷ Maynwaringe's statements demonstrate that by the end of the seventeenth century, English physicians had developed distinctly medical explanations of drunkenness as a function of the negative effects of the drink itself on the body and mind. These effects were explained in terms of the dominant Galenic humoral understanding of the body. The commercialisation of distilled spirits, the development of medical frameworks to understand drunkenness and the growing emphasis on the material causes of drunkenness would become mainstream medical thought during the medical Enlightenment in the century that followed.

Mechanical medicine and the Gin Craze, c. 1700–1760

During the first half of the eighteenth century, the rising consumption of distilled spirits, particularly in London, England's urban centre and one of Europe's largest cities, inspired social, medical and political anxiety that historians have dubbed the Gin Craze. The democratisation of distillation through the publication of vernacular manuals, royal encouragement of a domestic distilling industry and the growth of an impoverished urban underclass resulted in dramatic increases in the common consumption of distilled spirits that had previously been the rare medicinal product of alchemical laboratories.³⁸ During this period, the interest of physicians, natural philosophers and clergymen in the medical consequences of drunkenness on individuals as well as the body politic increased. The physical destruction wreaked by drinking on individual bodies, they worried, would lead to an irreversible physical and moral degradation of the labouring classes and elites alike, weakening the nation. Their configuration of drinking as an economic, social and political threat drew heavily upon medical explanations of the effects of drunkenness on the body and mind.

The Gin Craze coincided with a period of significant changes in medical theories about the body and its functions. By the early 1700s, learned medical men believed that the physical body was composed of a series of interwoven fibres. While this idea had also been a part of Western medical thought at least since Galen, the idea that these fibres interacted with each other in a mechanical way was new. The advent of microscopy in the mid-seventeenth century enabled the observation of tissues at a level of magnification that made it appear that the whole body was made of fibres, not just muscles. Envisioning a 'fibre body', these early Enlightenment physicians believed that interwoven fibres formed the fundamental building blocks of the corporeal human form.³⁹ The emergent view that the body was physically composed of a multitude of fibres was further materialised by the application of Newtonian natural philosophy, which applied mechanical explanations of motion to medicine – an Enlightenment project known by historians as medical materialism or iatromechanism.⁴⁰

The mechanical fibre body paradigm was operationalised for the medical profession by Herman Boerhaave (1668–1738), an influential Dutch medical teacher in Leiden, at the turn of the eighteenth century.⁴¹ Boerhaave ‘proposed that physical systems throughout the body comprised an integrated, balanced whole in which pressures and liquid flows were equalised and everything found its own level’.⁴² These fluid flows were regulated by the tension in the solid fibres containing them. Boerhaave wrote that the ‘Body consists of two parts, *Solids* and *Fluids*’ and ‘*Health consists in an equal motion of the Fluids, and an equal resistance of the Solids in every part*’. If this tension was imbalanced in either direction, disease resulted. By extension, food and drugs, many of which had entered common use through the influence of chemical medicine on popular practices, ‘are ... *mechanical* instruments ... by means of which’ the physician could manipulate the body’s fibrous tension. ‘Every Medicine produces its effects *mechanically*’ by ‘changing ... the figure, motion and bulk of’ the matter composing the body.⁴³ He classed intoxicating drinks among those substances that acted directly on the body’s fibres by virtue of their acidity, a physical property denoting that the particles possessed sharp or pointed edges that poked or lacerated the fibres.⁴⁴

Iatromechanical visions of the fibre body, however, did not displace older medical theory. Instead, as Porter points out, the ‘old humoral emphasis on balance’ was ‘preserved but translated into mechanical and hydrostatic terms’.⁴⁵ Likewise, the emphasis on the individual’s responsibility for maintaining preventative health based on the non-naturals – especially eating and drinking – never changed. Channelling Sydenham, whom he regarded as equal only to Hippocrates, Boerhaave believed that corrupted, chronic disease-causing matter could be ‘bred in the Body’ via ‘Air, Meat, Drink, Sauces, medicines, or Poisons’.⁴⁶ Similarly, one of his most influential students, the Edinburgh physician and instructor William Cullen (1710–1790), who transmitted Boerhaave’s views into the English-speaking medical world via the medical school in Edinburgh, wrote in his discussion of dyspepsia that ‘sedative or narcotic substances’, including tea, coffee, tobacco, ardent spirits and opium, all possessed the ability to disorder the fibrous tension. An ‘indolent and sedentary life’, especially if accompanied

by excessive ‘venery’ and ‘[f]requent intoxication’, Cullen wrote, disordered alimentary and nervous function, eventually debilitating the body’s constitution.⁴⁷

As in the preceding centuries, new medical knowledge generated by men like Boerhaave and Cullen circulated freely in health guides, which remained as popular as ever. Mechanical explanations of the body and its interaction with food, drink and medicines was quickly adopted by popular medical writers. For example, the physician Thomas Short (1690–1772) wrote several guides specifically focusing on food and drink that explained the effects of distilled spirits within an iatromechanical framework. ‘All Spirits cause Drunkenness’, Short wrote, by causing an ‘Overfusion of the Fluids, and the Distention of their containing Vessels’. The spirituous ‘*Spicula*’ worked by ‘darting into and pricking the relaxed Vessels ... till the Person becomes paralytic, lethargic, apoplectic, convulsed, stupid, &c.’⁴⁸ He further supported his assessments by citing medical materialists.⁴⁹ Within the context of Gin Craze anxieties, medical writers mobilised the fibre body paradigm to explain drunkenness. Mechanical explanations of how intoxication harmed the fibre body materialised the intoxicant, in this case, distilled spirit, as a discrete substance to which physicians and clergymen attached notions of physical and mental harm.

One of the most prolific of these writers was George Cheyne. Born in Scotland, Cheyne went to the medical school in Edinburgh, where he studied with Archibald Pitcairn (1652–1713), a dedicated early medical Newtonian. Like his mentor, Cheyne may have also spent some time in Leiden. In 1701 Cheyne began his career in London, joining the Royal Society the following year, and became acquainted with Newton himself. However, enjoying a lifestyle of urban luxury customary in the metropolis left him severely overweight and prone to illness. These circumstances prompted him to move his practice to Bath, a town associated with healing, in 1718. Treating the various afflictions of the English social elite who congregated there, Cheyne advocated a lifestyle of moderation and a vegetarian diet, which he regarded as having restored his own ill health. It was during his career in Bath that he wrote his most popular works on the preservation of health, *An Essay on Health and Long Life* (1724) and *An Essay*

on *Regimen* (1740). Both became some of the period's best sellers, were reprinted in multiple editions and were often cited by English-speaking physicians well into the nineteenth century.⁵⁰ It was in these health guides that Cheyne adopted the mechanical fibre body paradigm to discuss the effects of drunkenness. He concluded that, because they hardened, constricted and solidified the body's fibres, '*Spirituos* Liquors, are really *Poison* to' the 'Constitution', which, once destroyed, took on a now familiar slew of chronic diseases, including gout, rheumatism, apoplexy and various nervous maladies.⁵¹

While Cheyne did not devote an entire treatise to drunkenness specifically, his contemporary Stephen Hales (1677–1761), a clergyman and natural philosopher, did just that. A studious Cambridge man, Hales became a member of the Royal Society in 1717 and the perpetual curate (a kind of parish priest in the Church of England) of Teddington. In this bucolic town located a day's carriage ride west of London, Hales became a polymathic researcher, with interests ranging from astronomy and botany to the distillation of seawater and ventilation of air to improve conditions aboard ships in the Royal Navy. Hales also became interested in what he called statics, measuring the pressure of fluids within plants and animals, a project that was informed by his interest in medical materialism and the social context of the Gin Craze.⁵² These investigations included testing the effects of distilled spirits on the body's tissues.

In 'Experiment XV', Hales described his efforts to determine the effect of various fluids, specifically brandy and water, on bodily tissues. Taking 'a young spaniel dog' that 'had bled to death by having his jugular veins cut', Hales opened its body cavity and applied various fluids to the digestive organs, determining their effect on the tissue by measuring the displacement of their volume in a marked glass tube that he had inserted into the aorta.⁵³ On the basis of such studies, Hales concluded that 'brandy contracts the fine capillary arteries of the guts', but 'that water soon relaxes them again', a finding that confirmed that distilled spirits harmed the body, while water was healthy.⁵⁴ Moreover, he sought to educate the public about the results of the 'Experiments' he had 'purposely made, with Brandy, on ... Animals' by publishing A

Friendly Admonition to the Drinkers of Gin, Brandy, and Other Distilled Spirituous Liquors in 1733, the height of the Gin Craze.⁵⁵ The pamphlet would be reprinted in multiple editions in the decades that followed, often at times of peak concern about drinking.

While many Gin Craze writers continued to lament that drunkenness destroyed an individual's morality and, thereby, society more generally, Hales made, according to Patrick Dillon, one of the first 'detailed medical case[s] against the abuse of spirits'⁵⁶ by marshalling the explanatory power of the popular fibre body paradigm. By 'frequently contracting and shrivelling, and then soon after relaxing' the fibres of the body, Hales wrote, distilled liquors 'weaken and wear out the Substance and Coats of the Stomach, on which they ... immediately prey, every time they are drank'. Liquor destroyed the 'habituate[d]' drinker's 'Appetite and Digestion', 'dr[ie]d up, and spoil[ed] the Nerves', making them 'insensible', and hurt 'the very fine Blood-Vessels, especially where their Fibres are most tender, as in the Brain; whereby they spoil the Memory and intellectual Faculties'. Together, these effects destroyed 'the natural Temper', the constitution, of the body.⁵⁷

Using the terminology of Boerhaave's medical materialism, Hales explained in later editions of the *Friendly Admonition* that distilled liquors had these unhealthy effects because of their physical properties, their 'harsh, fiery and acrimonious Nature'.⁵⁸ These deleterious physical and mechanical properties convinced Hales that 'these *spirituous Liquors* ... are ... direct *Poison to human Bodies*', an argument that would become a defining feature of nineteenth-century toxicology manuals and temperance discourses.⁵⁹ By focusing on the physical properties of distilled spirit, Hales helped cement the notion that drunkenness and its chronic consequences were the distinctly physical result of spirit ingested into the body, rendering a substance that had hitherto been considered *aqua vitae*, the water of life, as a poison. And further demonstrating the interplay between elite medical theories and popular health discourses, Hales cited widely read physicians like Thomas Short and George Cheyne frequently in his discussion of intoxication.

Hale's ideas were readily adopted by some of his fellow clergymen, most notably Thomas Wilson (1703–1784). Wilson became a friend of Hales through the Society for the Promotion of Christian

Knowledge, a moral reform organisation in which both men participated. The son of the elder Thomas Wilson (1663–1755), who had served as the well-respected Bishop of Sodor and Man, Wilson moved to London to launch his clerical career in the 1730s, the height of the Gin Craze. Searching for worthy causes to adopt, he was inspired by Hales and his work on drunkenness. In 1736 he published his own book, *Distilled Spirituous Liquors the Bane of the Nation*, which drew heavily upon Hales's arguments. His analysis of the physical effects of liquor was 'grounded upon the Experiments of a very Curious Gentleman', most probably Hales, 'to whom the learned World, and especially the Physicians have been indebted'. If that was not convincing enough to the reader, Wilson also 'had the Opinion of two or three eminent Physicians in Town' and cited the work of other medical men, especially George Cheyne.⁶⁰

Literal medical explanations of drunkenness were often applied to society, which was envisioned as a metaphorical body. Comparing the spread of drunkenness to contagion and plague, Wilson called it a spreading 'INFECTION', a 'Great Injury' that 'accrues to the Publick, by making and vending such Quantities of Distilled Spirituous Liquors'.⁶¹ Drunkenness laid 'the Foundation of Distempers, which will be handed down to their posterity; so that in a Generation or two We shall not have People able to do the Servile Offices, or to cultivate our Lands'.⁶² The success of English society depended on the health of the 'Bodies of Men', which 'are without doubt the most valuable *Treasure* of a Country'. Drunkenness among 'the *ordinary People*' caused particular concern because they 'are as serviceable to the Commonwealth as the *Rich*'. For 'if they are *able* to work, or are *employed* in honest Labour and useful Arts; and such being more in Number', they 'do more contribute to the Nation's *Wealth* than those of *higher Rank*'.⁶³ By afflicting all classes, the physical and social disease of drunkenness threatened the national body politic.

By the end of the eighteenth century, the link between poison, distilled spirits and chronic disease – understood within the frame of the fibre body – had become unassailable medical knowledge for a small but growing cohort of Edinburgh-trained physicians. Men like Anthony Fothergill (1732–1813), John Coakley Lettsom

(1744–1815) and Thomas Trotter (1760–1832) agreed that the longer and more frequently they were ingested, distilled spirits degraded the body's natural health, debilitating the drinker's physical, mental and moral capacities.⁶⁴ The most influential of these, Thomas Trotter, who became an esteemed naval physician, recognised that 'independent of its intoxicating quality', distilled spirits possessed 'a chemical operation in the human body' that acts deleteriously 'upon the fibers'.⁶⁵ That 'our intellectual part' could 'be disturbed, and so completely deranged' by the physical consequences of drunkenness Trotter declared to be 'a fact sufficiently established to be universally admitted'.⁶⁶

Transatlantic circulations, c. 1750–1820

An awareness of distilled spirits and drunkenness expressed in terms of medical materialism was not confined to Britain. Ideas expressed by writers like Cheyne and Hales crossed the Atlantic via growing networks within which letters, books and other printed materials circulated between learned men. Through his work with the Society for the Promotion of Christian Knowledge, Hales became closely associated with efforts to establish the penal colony of Georgia. On 30 May 1733, he bequeathed to the trustees of the colony a donation of religious texts, including 200 copies of his newly printed *Friendly Admonition to Drinkers of Brandy* for shipment across the Atlantic.⁶⁷ Several decades later, in 1758, Hales wrote a letter to 'several Governors in America' that summarised his arguments about distilled spirits, which was published, along with extracts from his writings on distilled liquors, in the *New American Magazine*. It made an impression, for a 1759 pamphlet, condensed as 'The pernicious practice of dram-drinking', began with the remark that 'it hath been thought expedient to cause a Number of' additional copies 'to be reprinted, and dispersed gratis amongst the Inhabitants ... of New-Jersey'.⁶⁸

These initial circulations of Stephen Hales's research into New Jersey and Georgia found a fertile home in Philadelphia during the second half of the eighteenth century. In this period, Philadelphia became one of North America's most prosperous cities, a port that

received goods, ideas and knowledge from across Britain's growing empire. The city's elites, including a growing number of learned physicians, saw themselves as members of a Republic of Letters, a network of personal relationships and epistolary correspondence that transmitted medical, scientific and philosophical knowledge in both directions across the Atlantic.⁶⁹ The integration of Philadelphia into transatlantic commercial and intellectual networks made it particularly receptive to English medical ideas, theories and practices. If North America became, in the words of Helen Brock, a 'Western outpost of European medicine', Philadelphia became its leading *entrepôt* of medical knowledge.⁷⁰

It was within this context that Anthony Benezet (1713–1784), a French Huguenot-turned-Quaker, became interested in the social, medical and moral problems of drunkenness. Born into a Protestant family in Catholic France, Benezet emigrated and became a Quaker before finally settling in Philadelphia in 1731. He is primarily remembered as an educator and abolitionist.⁷¹ Interested in solving what he considered the most pressing problems of his time, Benezet was also inspired by Hales's work on drunkenness. Worried about 'the dreadful havock made by the excessive use of distilled spirituous liquors in' the English colonies, he was moved to 'insert in one of the almanacks an extract of what had been written on that subject by Dr. Hales'.⁷² In 1774 he published his own essay on the matter. Although Benezet was not a physician, his essay relied almost exclusively on early eighteenth century British and European medical sources. Much of the essay consisted of large direct quotes reproduced from learned medical authorities like Stephen Hales as well as writers from the ever-popular health guide genre such as Thomas Short and George Cheyne. Like his *Gin Craze* contemporaries, Benezet focused primarily on the problems that intoxication posed to bodies and minds and on how, in turn, their consequences threatened society more generally.

Benezet's influence would inspire another Philadelphian, Benjamin Rush (1746–1813), a signatory of the Declaration of Independence, a physician and social reformer and the first American citizen to write about the medical consequences of drunkenness. Rush's *Inquiry into the Effects of Ardent Spirits upon the Body and Mind*, first published in 1784, recapitulated several centuries of early

modern English medical knowledge about drunkenness.⁷³ Rush's book was reprinted in multiple editions during the nineteenth century (see [Figure 0.1](#)), and his interest in the medical aspects of drunkenness and his reform impulse would inspire several generations of American and British temperance activists of all stripes.⁷⁴

The growing concern about distilled spirit during the eighteenth century, not just the state of drunkenness and the drunkard as an individual, redefined 'alcohol' as a term which gradually came to signify the discrete chemical substance within fermented and distilled beverages directly responsible for the physical and mental effects of drunkenness and its chronic consequences. Traditionally, 'alcohol' derived from an Arabic alchemical term that signified any subtle material and, later, any distillate more generally.⁷⁵ Thus during the Gin Craze, distilled spirits would have been understood as a type of alcohol. And while wine, beer, ale, cider and other fermented beverages were understood to possess the ability to bring about drunkenness, distilled spirits were understood as a separate substance, changed from its original form by the process of distillation itself. Writers like Hales and Wilson expressed this understanding when they described the effects of drinking distilled spirits because of them having been 'inflamed by repeated Distillations'.⁷⁶ Hales later wrote that distilled spirits contained 'pernicious, burning, caustick salts' that had been produced 'by the action of fire on them in distillation'.⁷⁷

However, the growing association of distillation with drinking and new chemical understandings of fermentation meant that the term 'alcohol' increasingly indicated a discrete chemical substance, a product of sugar fermentation, within all intoxicating drinks.⁷⁸ Physicians gradually adopted this view. For example, Thomas Trotter wrote that the 'inebriating quality of all liquors ... depends upon the alkohol which they contain', a 'word ... of Arabic origins' meaning 'the *pure spirit* separated by repeated distillations from all grosser matter'.⁷⁹ Similarly, the physician and natural philosopher Erasmus Darwin considered a whole range of fermented and distilled drinks, including 'rum, brandy, gin, whisky, usquebaugh, wine, cyder, beer, and porter' to be forms of 'alcohol'.⁸⁰ Although the Swiss naturalist and chemist Nicolas-Théodore de Saussure (1767–1845) determined the exact chemical composition of alcohol

in 1804, the differences between fermented and distilled beverages remained unsettled until the work of the English chemist William Thomas Brande (1788–1866) during the early nineteenth century.⁸¹

Born into a family of apothecaries in London, Brande trained as a physician and initially intended to practise medicine. After meeting Humphry Davy (1778–1829) and attending his lectures, Brande became interested in chemistry. He began his career with a study that established once and for all that alcohol was a discrete chemical substance in all intoxicating drinks, and for which he was awarded the Royal Society's highest honour, the Copley Medal.⁸² Publishing his findings in the *Philosophical Transactions of the Royal Society of London* in 1811, Brande criticised the 'commonly received opinion, that the alcohol obtained by the distillation of wine, does not exist ready formed in the liquor' but is formed by the 'operation' of distillation.⁸³ Conducting a series of experiments in which he altered various distillation parameters, Brande concluded that alcohol was present in the whole range of fermented and distilled beverages; distillation simply concentrated the spirit that fermentation had formed. He closed the article with a table listing the popular drinks at the time, including the percentage of alcohol each contained.⁸⁴ Cutting through debates about what exactly alcohol was, Brande's findings resonated with temperance reformers, many of whom were physicians. By the 1830s, fermented drinks like beer, wine and cider were soon thought to be as harmful as distilled spirits. Popularised by the Englishman Joseph Livesey, teetotalism – the total abstinence from all intoxicating drinks – would become temperance orthodoxy on both sides of the Atlantic Ocean.⁸⁵

Conclusion

The pathologisation of distilled spirits, which emphasised their deleterious agency on the physical body, also fostered new attention on the loss of control that so often seemed to accompany heavy drinking. As Jessica Warner discovered, seventeenth-century writers frequently recognised that drunkenness was a difficult sin to quit and used the language of disease to describe it.⁸⁶ In a 1609 sermon,

the preacher John Downname (1571–1652) employed the metaphors of slavery and feudal allegiance to describe the loss of control to which drinkers often succumbed. The ‘drunkard by his much tipling maketh himselfe a slaue to his vice’, Downname wrote, ‘and by long custome bringeth superfluitie into vrgent necessitie’, which reigned over the body as a lord over his vassals. Drunkenness was first ‘committed, then practised, and often practise bringeth custome, and custome becommeth a second nature, and hath in it the force of a law which must be obeyed, not in courtesie, but vpon necessitie’ until drinkers ‘bring themselues to such an vn-satiabie thirst, that they cannot sit without the cup at their elbow’.⁸⁷

During the eighteenth century, writers still denounced the inability to control one’s consumption of intoxicating drinks as a personal failure of self-control and willpower, but they increasingly recognised that once the drinking commenced, distilled spirits gradually degraded the body’s physical health – which was required for mental function, morality and willpower – using a mixture of religious concepts, medical knowledge and the metaphor of slavery to describe the process of habituation. The ‘bewitching Naughtiness in these Fiery Liquors’, wrote Stephen Hales, caused ‘a Man’s Will and Affections’ to become so ‘depraved’ that he becomes ‘delighted with this worst of Slavery’, a condition analogous to that of a ‘Madman’.⁸⁸ Similarly, George Cheyne wrote, ‘Drops beget Drams, and Drams beget more Drams, ’till they come to be without Weight and without Measure’.⁸⁹ This understanding informed the work of physicians in the second half of the eighteenth century like John Coakley Lettsom. ‘[W]hen the indulgence in spirituous liquors is rendered habitual’, Lettsom wrote, ‘it is extremely difficult to overcome’. The ‘debility and tremors of the body’ and the ‘horrid ... despondency of the mind after the exhilarating effects of these liquors have subsided’ made it very difficult to ‘vanquish this habit’ of taking the ‘delusive poison’.⁹⁰ In North America, Benjamin Rush wrote that drunkenness and its consequences represented ‘a disease induced by an act of vice’.⁹¹ In his final work, *Medical Inquiries and Observations, upon the Diseases of the Mind* (1812), Rush explained, ‘The use of strong drink is at first the effect of free agency’, but once a ‘habit’ formed, continual drinking became ‘necessity’.⁹²

But does the continuity between such statements really represent an early modern concept of alcoholism and addiction, as Roy Porter and Jessica Warner posited? Even though the modern recognition of alcoholism as a form of addiction did not really take hold until the second half of the nineteenth century, the development of the understanding that distilled spirits degraded the power of will reveals that the pathologisation of intoxication was part of a broader medicalisation of right living in the early modern period that preceded the development of modern addiction concepts. As Andrew Wear writes, the 'sense of moral imperative' associated with health advice lends support to the argument that the very specific and detailed advice given on diet and on healthy places in which to live was a form of medicalisation, 'a process in which 'physicians were trying to bring ways of living, and indeed, the whole world, under medical scrutiny and control'.⁹³ Although 'this process had limited success', a 'medical view of the environment and of diet was shared across literate culture, even if the knowledge was not always acted upon'.⁹⁴ Thus in the early modern period, drunkenness was pathologised as a cause of grievous diseases. Gradually, distilled spirits and, later, the alcohol within them, and their ability to cause drunkenness were pathologised as substances poisonous to the body and mind.

The increased attention to the physical properties of distilled spirits during the eighteenth century and the emergence of the modern definition of alcohol in 1811 ascribed a new degree of agency to the intoxicating beverages themselves. While these discourses remained very much concerned with the drunkard's individual responsibility for his condition, the new focus on distilled spirits and alcohol pathologised drinking in ways that became useful to emerging temperance movements and the budding nineteenth-century psychiatric profession alike. By the 1820s to 1830s, the idea that alcohol was a discrete chemical substance in all intoxicating drinks was expressed by temperance writers on both sides of the Atlantic, who routinely included Brande's chart in their publications and transformed the traditional meaning of temperance as moderation to total abstinence, eventually calling for the complete prohibition of all alcoholic drinks.⁹⁵ Just as Thomas Wilson had called distilled liquors the bane of the nation,

so too in the nineteenth century, temperance reformers united against King Alcohol and Demon Rum, personifications of the intoxicating substance itself. Intemperance had become all but synonymous with excessive alcohol use during the first decades of the nineteenth century. In 1849 the Swedish physician Magnus Huss coined the term 'alcoholism', a lexical construction in which the medical condition described was now named directly after the substance causing it.⁹⁶ Even though the term was slow to catch on, not entering more common usage until the turn of the twentieth century, its emergence demonstrates the degree to which alcohol had become materialised and pathologised by the mid-nineteenth century.

Early modern medical writing about intoxication, therefore, demonstrates that drunkenness had acquired distinctly medical characteristics before the emergence of psychiatry during the nineteenth century. Translating traditional Galenic and humoral medicine into Enlightenment terms, medical materialism provided a new framework for explaining how breaking the rules of right living brought about debility and disease by emphasising physical causes, specifically the effects of distilled spirits on the body and mind. The mechanical explanations of drunkenness promoted by natural philosophers like Stephen Hales, popular health writers like George Cheyne and clergymen like Thomas Wilson pathologised distilled spirits as poisonous substances whose physical effects translated into mental changes, altered behaviour and, ultimately, a loss of control that resembled sin and disease simultaneously. Moreover, medical explanations were adopted by clergymen, who used them both literally and metaphorically. Neither disease nor addiction in the modern sense, the effect of distilled spirits and intoxication was nevertheless explained within medical frameworks that supported traditional denunciations of drunkenness as a vice or sin. A growing sense that distilled spirits possessed physical properties that caused a loss of control over appetite blurred the boundary between disease and sin, complicating the distinction between the physical effects of distilled spirit and an individual's responsibility for right living once craving rendered drinking a necessity.

Notes

- 1 *An Inuectiue ageinst Glotony and Dronkennes* (London: Printed by Richard Lant and Richard Bankes, 1545), 7r.
- 2 Historians conventionally call the period from c. 1500 to 1800 the early modern period. Andrew Wear, *Knowledge and Practice in English Medicine, 1550–1680* (Cambridge: Cambridge University Press, 2000); Elizabeth Lane Furdell, *Publishing and Medicine in Early Modern England* (Rochester: University of Rochester Press, 2002).
- 3 Within a vast historical literature on alcoholism, see especially Jean-Charles Sournia, *A History of Alcoholism*, trans. Nick Hindley and Gareth Stanton (Cambridge: Basil Blackwell, 1990); Mariana Valverde, *Diseases of the Will: Alcohol and the Dilemmas of Freedom* (Cambridge: Cambridge University Press, 1998); Peter Ferentzy, 'From sin to disease: differences and similarities between past and current conceptions of chronic drunkenness', *Contemporary Drug Problems*, 28, no. 3 (1 September 2001), 363–90; Sarah W. Tracy, *Alcoholism in America: From Reconstruction to Prohibition* (Baltimore: Johns Hopkins University Press, 2005); Matthew Warner Osborn, *Rum Maniacs: Alcoholic Insanity in the Early American Republic* (Chicago: University of Chicago Press, 2014).
- 4 Peter Conrad, *The Medicalization of Society: On the Transformation of Human Conditions into Treatable Disorders* (Baltimore: Johns Hopkins University Press, 2007), 4.
- 5 An influential early essay supporting this view is Harry G. Levine, 'The discovery of addiction: changing conceptions of habitual drunkenness in America', *Journal of Studies on Alcohol*, 39, no. 1 (1978), 143–74.
- 6 Roy Porter, 'The drinking man's disease: the "pre-history" of alcoholism in Georgian Britain', *British Journal of Addiction*, 80, no. 4 (December 1985), 385–96; Jessica Warner, "'Resolv'd to drink no more": addiction as a preindustrial construct', *Journal of Studies on Alcohol*, 55, no. 6 (1994), 685–91; James Nicholls, 'Vinum Britannicum: the "drink question" in Early Modern England', *Social History of Alcohol and Drugs*, 22, no. 2 (2008), 190–208.
- 7 Porter, 'The drinking man's disease', 385.
- 8 Virginia Berridge, Jennifer Walke and Alex Mold, 'From inebriety to addiction: terminology and concepts in the UK, 1860–1930', *Social History of Alcohol and Drugs*, 28, no. 1 (2014), 88–106; William L. White, 'The lessons of language: historical perspectives on the rhetoric

- of addiction', in Sarah W. Tracy and Caroline Jean Acker (eds), *Altering American Consciousness: The History of Alcohol and Drug Use in the United States, 1800–2000* (Amherst: University of Massachusetts Press, 2004), 33–60.
- 9 Phil Withington, 'Introduction: cultures of intoxication', *Past & Present*, 222, supplement 9 (1 January 2014), 14. See also Jonathan Herring et al. (eds), *Intoxication and Society: Problematic Pleasures of Drugs and Alcohol* (Macmillan International Higher Education, 2012).
 - 10 On the language of addiction in the early modern period, see especially Jose Murgatroyd Cree, 'Protestant Evangelicals and addiction in Early Modern English', *Renaissance Studies*, 32, no. 3 (2018), 446–62. A landmark study about the contributions of medical professionals to temperance reform, albeit in nineteenth-century America, is Osborn, *Rum Maniacs*. The role of physicians in early modern English discourses about compulsive drinking is also a key feature of James Nicholls, *The Politics of Alcohol: A History of the Drink Question in England* (Manchester: Manchester University Press, 2011), 59–72.
 - 11 See especially David Clemis, 'medical expertise and the understandings of intoxication in Britain, 1660–1830', in Jonathan Herring et al. (eds), *Intoxication and Society: Problematic Pleasures of Drugs and Alcohol* (New York: Palgrave Macmillan, 2013), 33–51.
 - 12 Clemis, 'Medical expertise', 34.
 - 13 Clemis, 'Medical expertise', 35.
 - 14 Clemis, 'Medical expertise', 35.
 - 15 See especially Susanne Schmid and Barbara Schmidt-Haberkamp (eds), *Drink in the Eighteenth and Nineteenth Centuries* (Abingdon: Routledge, 2014).
 - 16 Clemis, 'Medical expertise', 35–36.
 - 17 Furdell, *Publishing and Medicine in Early Modern England*, 28.
 - 18 Furdell, *Publishing and Medicine in Early Modern England*, 28.
 - 19 Wear, *Knowledge and Practice in English Medicine*, 154; Furdell, *Publishing and Medicine in Early Modern England*, 3.
 - 20 Clemis, 'Medical expertise', 34–6; Wear, *Knowledge and Practice in English Medicine*; Furdell, *Publishing and Medicine in Early Modern England*, 3–4.
 - 21 Wear, *Knowledge and Practice in English Medicine*, 156.
 - 22 Wear, *Knowledge and Practice in English Medicine*, 156.
 - 23 Wear, *Knowledge and Practice in English Medicine*, 154–6; Furdell, *Publishing and Medicine*, 3.
 - 24 Clemis, 'Medical expertise', 34–6; Wear, *Knowledge and Practice in English Medicine*, 155, 178–84. See also Rosenberg (ed.), *Right Living*.

- 25 Roy Porter, *Madness: A Brief History* (Oxford: Oxford University Press, 2003), 153.
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- 28 William Bullein, *A Newe Booke Entituled the Gouvernement of Health* (London: Printed by Ione Day, 1558), p. cx.
- 29 Henry Wingfield, *A Compendious or Short Treatise, Gathered out of the Chiefe and Principall Authors of Phisicke Conteynyuge Certeyne Preceptes Necessary to the Preseruacion of Health, and Longe Continuance of the Same* (London: Printed by Robert Stoughten, 1551), ch. 6. For a similar description, see Andrew Boorde, *Compendyous Regyment or a Dyetary of Helth* (London, 1547), chs IX–X.
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- 33 Everard Maynwaringe, *The Method and Means of Enjoying Health, Vigour, and Long Life* (London: Printed by J.M. for Dorman Newman, at the Kings-Arms in the Poultry, 1683), 120–1.
- 34 Maynwaringe, *The Method and Means*, 124–5.
- 35 Maynwaringe, *The Method and Means*, 130. Italics in original text.
- 36 Maynwaringe, *The Method and Means*, 134. Italics in original text.
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- 43 Herman Boerhaave, *A Treatise on the Power of Medicines*, trans. John Martyn (London: Printed by C. Jephson for John Wilcox, and James Hodges, 1740), 11–13. Italics in original text.
- 44 Boerhaave, *A Treatise on the Power of Medicines*, 45, 50, 96–7.
- 45 Porter, 'Medical science', 143.
- 46 Herman Boerhaave, *Boerhaave's Aphorisms: Concerning the Knowledge and Cure of Diseases* (London: Printed for B. Cowse, and W. Innys, in St. Paul's Church-Yard, 1715), 278.
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- 49 Short, *Discourses on Tea*, 185–7.
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- 54 Hales, *Statical Essays*, vol. 2, 124.
- 55 Stephen Hales, *A Friendly Admonition to the Drinkers of Brandy, and Other Distilled Spirituous Liquors* (London: Printed for Joseph Downing, 1733), 4.
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- 93 Wear, *Knowledge and Practice in English Medicine*, 155.
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- 95 On Brande's influence in the USA, see Rorabaugh, *The Alcoholic Republic*, 101–02; Blocker, *American Temperance Movements*, 23.
- 96 Tracy, *Alcoholism in America*, 41.