Madness De-Humourred

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Anatomical investigations about the brain in the Early Modern period did not immediately overturn the Galenic theories of mental disorder. There is a gradual shift evident in the disparate accounts of, and particular forms of attention to, mental illness at different ends of the seventeenth century, as witnessed in Robert Burton's *Anatomy of Melancholy* (1621) and Thomas Willis' *Pathologiae cerebri et nervous generis specimen* (1667). Even after the publication of *Pathologiae*, the debate would continue until the close of the eighteenth century. In his detailed study of the brain's anatomy, Willis employs a chemical rather than a humoural explanation of normal and abnormal brain pathology. This essay focuses on the emergence of technical specialisation in Willis' text and its effect on the general accessibility of ideas about mental disorders to be put to use in the public sphere. It will be shown that as the language used to identify mental disorders catered more and more to expertise, the general population lost its hold on characterising the disease and seeking adequate medical and legal measures to protect themselves and the disturbed person in question. This leads to a final speculation that Willis' work initiates the trajectory along which madness becomes a matter for the experts—and not the public—to define.

By the early decades of the seventeenth century, the debate between Galenic and Paracelsian medicine had not been conclusively settled. This ambiguity is present in the seminal text on mental disorder from this time period, Burton's *Anatomy of Melancholy*. Lawrence Babb analyzes the extent of Burton's familiarity with developments in natural philosophy in a number of disciplines, although here we are concerned only with his medical theories. Although Burton makes only a few, vague references to alchemy, they are always within the scope of the Paracelsian school. On the other hand, Hippocrates, Galen and Avicenna are among the most oft-quoted medical philosophers in *Anatomy of Melancholy*, all of whom advance a humoural understanding of the body. It is particularly noticeable in the "more strictly psychiatric sections," which include cures to restore balance.[1] Babb claims that on balance, Burton does not give preference to one interpretation or another, an ambivalence that is succinctly captured in the following statement, "'Let them agree as they will, I proceed.'"[2] In his final assessment, Babb remarks that Burton's medical views are at par with his time period, though there is no innovation in the *Anatomy* that would distinguish it from a medieval treatise.

Burton demonstrates that both soul and body are affected by melancholy. He adds his own opinion to the furious debate over whether or not occult forces are present in mental disorders, drawing on both ancient and medieval sources as well as several case studies. The Devil can work upon the mind, but, and this is key, the disease he inspires moves through a 'mediation of humours.' For example, citing Avicenna he writes, "[I]f contaminated by a daemon it is enough for

[1] Lawrence Babb, *Sanity in Bedlam: A Study of Robert Burton's Anatomy of Melancholy* (East Lansing: The Michigan State University Press, 1959), 73.

[2] Babb, *Sanity in Bedlam*, 68.

us that it tends the whole system towards black bile."[3] One will observe that the humour linked to demonic possession is black bile, an excess of which causes melancholy according to the Galenic tradition. Burton sides with ancient authorities like Tertullian and more recent figures like Cornelius Agrippa in believing that the Devil prays on an opportunity to exacerbate a person who already possesses a melancholic disposition.[4] Prior even to this attraction between black bile and demonic possession is provided in a citation Burton takes from Tertullian: "'tis to exercise our patience...virtue is not virtue unless it has a foe by the conquering of which it shows its merit; 'tis to try us and our faith, 'tis for our offences and for the punishment of our sins.'"[5] Burton frames this work of the Devil as a divinely sanctioned act of justice wherein the suffering caused serves a moral purpose. Evil, in other words, is actually the positive and constructive work of God, who "cast[s] upon them the fierceness of his anger, indignation, wrath, and vexation, by sending out of evil Angels. So did he afflict Job, Saul, the lunaticks and daemoniacal persons whom Christ cured."[6]

A few things can be highlighted from this short excerpt. Firstly, Burton's reliance on traditional authorities would suggest either his ignorance or suspicion of new knowledge. This underpins Babb's claim that *Anatomy of Melancholy* reads more like a medieval treatise. This interpretation must be contested given that the Burton's work does not employ one of the key stylistic markers of the medieval text—the *disputatio*. Burton never records any contrary view or opinion to the ones he presents to support his own view. Moreover, despite the fact that these cases are not ones he himself has composed, he uses several examples of patients from actual medical documents recorded by physicians to support his claims with at least a modicum of empirical observation. Looking closely at these cases, there is a great disparity in the symptoms and cures, a point of immense frustration for Burton, whom the editors quote as saying "the Tower of Babel never yielded such confusion of tongues as this Chaos of Melancholy doth of Symptoms."[7] In the end, *Anatomy of Melancholy* does not seem to provide or be aimed at generating breakthroughs in psychology, considering that it openly respects older authorities and eschews clinical data of its own. Nevertheless, Burton's work is still valuable in that it shows the Galenic character of early seventeenth-century views on mental disorder in England

This consideration of Robert Burton's work places Thomas Willis' detailed investigations in the 1660s in greater relief. Willis, an Oxford educated physician, took into account clinical observations of numerous patients over a period of many years. He combined this with experimental tests of Paracelsian chemical theory, and, most famously, his richly detailed anatomical dissections of the brain. The end result was one of the first tractates on neurology. The popular science essayist, Carl Zimmer, gives a lucid account of Willis' ground-breaking developments not only against the backdrop of earlier models of neural anatomy and psychology, but also the events of the English Civil War and Restoration period. One relevant detail is that Willis' Royalist loyalties forced him into professional exile during the war. Since he could only acquire menial work, he had considerable time to devote towards investigating and preparing medicines in what were the first alchemical laboratories at Oxford.[8]

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[3] Robert Burton, "The Anatomy of Melancholy" in *Medicine and Western Civilization*, ed. Stephanie A. Kiceluk, Steven Marcus, David. J. Rothman (New Jersey: Rutgers University Press, 1995), 160.
[4] Ibid., 160.
[5] Ibid., 161.
[6] Ibid.
[7] Ibid., 159.
[8] Carl Zimmer, *Soul made Flesh: the Discovery of the Brain—and How it Changed the World* (New York: Free Press), 86.

Willis' alchemical theories were influenced by the Paracelsian disciple, Joan Baptista van Helmont. Van Helmont remodelled Paracelsus' claims about the 'internal alchemists' operating within the body's individual organs into what he called a process of 'fermentation,' in which one substance loses its identity and assumes a new one.[9] Willis also followed van Helmont in his use of solvents, applying them to urine and blood to try and break them down. These experiments called Galenic theory into question because these substances could be broken down into more primary components, an impossibility for the indivisible, non-transmutable humours.[10, 11] Robert Boyle, introduced Willis to corpuscular physics, and together they both sought to reconfigure the work of van Helmont according to particles, not occult forces. This work on alchemy was crucial in leading Willis to speculate that the brain functioned similarly to the alembic: "The brain, the skull that capped it, and the nerves that descended from it all looked to him like 'a glassy alembic, with a sponge laid upon it, as [Willis and his colleagues] use to do for the highly rectifying of the spirit of wine.'"[12] Willis wondered whether, like the vegetable substances used to make alcohol in the alembic, spirits were distilled from the blood just before they reached the brain, which the brain tissue itself then absorbed. From there, the spirits could be channelled through the nerves, or to continue the analogy, the necks of the alembic.

Much of this incisive hypothesis was confirmed through the countless dissections Willis conducted. Vesalius had been impeded in his anatomical study of the brain by the organ's rapid post-mortem rate of decay. Luckily for Willis, Boyle had discovered the preserving properties of wine, which lengthened the period over which the brain could be studied. In addition, Willis was able to exhume the brain as a whole whereas Vesalius could only examine it in slices that quickly became messy and unusable. Willis also investigated passageways within the brain by injecting ink into the two carotid arteries of a dog's brain and observing as it spread across the whole organ, except the ventricles. Following Robert Hooke's inspired use of the microscope, Willis was able to study the structure of nerves in fine detail.[13] Amalgamating these studies together, Willis was able to arrive at a novel, alchemical explanation that systematised the brain and its nerves. In brief, animal spirits residing in the nerves detect signals from the outside world that are then relayed as messages to the brain. Muscles move once the spirit issuing from the brain reaches the end of a nervous fibre and reacts with sulphurous particles in the blood to create a miniscule explosion that causes the muscle to inflate. Higher cognitive functions like memory and reasoning were explained as the result of spirits striking the cortex with greater force.[14] He did not find this mechanism sufficient for explaining the rational capacity of man entirely, and so he posited that there was an immaterial, rational soul dependent on the sensitive soul's presentation of the world. In the healthy body, these two souls function cooperatively, with the latter accepting the guidance of the former—illness is essentially that which strikes them out of balance.[15]

Four decades after Robert Burton's *Anatomy of Melancholy*, Thomas Willis publishes *Pathologiae cerebri et nervous generis specimen*. This is an exemplary text in clinical studies, bringing together the predominant themes in Willis' work as outlined above: experimentalism, alchemy and anatomy. Unlike Burton, who found the diversity of melancholic symptoms too vast

[9] Carl Zimmer, *Soul made Flesh*, 88.
[10] Ibid., 91.
[11] Ibid., 122.
[12] Ibid., 153.
[13] Ibid., 176.
[14] Ibid., 180-181.
[15] Zimmer, *Soul made Flesh*, 223.

to outline in a general case, Willis takes care to distinguish between a great number of disturbed states and illnesses that had typically been conflated with each other. For example, the *Pathologiae cerebri* includes separate chapters on headaches, lethargy, 'continual sleepiness,' coma, vertigo, apoplexy, palsy, delirium, frenzy, melancholy, madness, stupidity or folly, gout, and 'colick.' This of course is apart from other treatises composed by Willis on jaundice, scurvy and fever, to name but a few. In each chapter Willis provides a definition for that condition, its symptoms, causes, prognosis, remedy, and usually one or two case studies. In connection to that, Willis often prefaces these examples with lines like "There being an infinite number of Melancholick persons, as well as of Fools, I shall illustrate our hypothesis only with two examples..."[16] This stands in contrast to Burton, who makes an indiscriminate use of such cases in his own work. At any rate, the specificity in Willis' text is unprecedented, and evidence of his training as a physician, chemist and anatomist is visible all throughout—it really appears to be medicine at its empirical best, certainly for that time period.

Two texts of particular interest here are the ones on melancholy and madness. A close study reveals that neither reference older authorities nor even religious ideas for the most part. Where devils are mentioned, there is always the qualifier, "whether real or imaginary." Willis, like Burton, believes demonic possession occurs only within the course of nature, but he explains this phenomena by corpuscular neurology rather than through the humours.[17] In any case, melancholy is defined as "a Raving without a Fever or Fury, joyn'd with fear and sadness,"[18] while madness is something of its opposite in that it is accompanied by boldness and fury instead; in fact, Willis claims madness as the "close ally of melancholia."[19]At the level of the animal spirit, the two have opposite effects. In melancholia, this spirit degenerates from its typically mild and subtle nature to an acetous and corrosive quality that creates new passages as they move through the brain. This in turn affects the corporeal or sensitive soul, which Willis describes as "being violently drawn away as it were, both separates from the Body and being modified according to the character of the Idea imprinted...."[20] In other words, the sensitive soul breaks free from the ordering faculty of the rational soul as the impression made by the degenerated animal spirit on the brain is removed steadily from a true presentation of the world, which is the task of the lower soul. There is a steady fixation on a distorted 'Idea,' which imprints itself on the rational soul to the extent that if it is wholly overwhelmed, these imaginary perceptions can be actualized in the patient's behaviour.[21] If nothing else, this explanation hints at the extraordinarily powerful consequences of disrupting the cooperation between these two souls; excessive melancholia seems able to unhinge people from reality, and indeed, Willis argues that it may even pass into madness. Willis also takes the physiological effect on blood into account: it slows down along with the animal spirit, becoming less reactive in the process.[22]

Meanwhile, madness can be explained by the expansion of the spirits beyond their normal boundaries by some violent or terrible passion. Once again, unusual passageways are opened in the brain, again disrupting the balance between sensitive and rational soul. The saline particles in

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[16] Thomas Willis, *The London Practice of Physick*, ed. Morton D. Bogdonoff et al. (1685; Reprint, New York: The Classics of Medicine Library, 1992), 472.
[17] Zimmer, *Soul made Flesh*, 205.
[18] Willis, *The London Practice of Physick*, 460.
[19] Ibid., 478.
[20] Ibid., 477.
[21] Ibid.
[22] Willis, *The London Practice of Physick*, 463-464.

the nervous juice that give the animal spirit such subtlety decrease and "Sulphureous Corpuscles" from the blood are sent to the brain, causing heightened reactivity.[23] The blood is also invigorated rather than stagnated, moving strongly and swiftly such that the characteristic of the madman is boldness as opposed to fear.

As can be seen, Willis' elaborations on just these two conditions point out an extensive body of knowledge acquired through theory, experiment and practice. This precision and consistency is markedly different from earlier works on mental illness in the seventeenth century, such as Burton's *Anatomy* and the extensive records of Richard Napier, a highly active physician in Buckinghamshire from 1597 to 1634. Terminology has been carefully crafted in the *Pathologiae cerebri* to define the symptoms and causes of mental disorders, drawing on a far more specialized study in natural philosophy than seen beforehand. In terms of the cures and remedies offered by Willis, the old techniques of bloodletting and purging remain, though their rationalization is changed in light of the alchemical model of the body rather than the humoral one. In addition, there is an assortment of medical recipes, both alchemical and herbal in nature. Altogether, the text reveals a dramatic specialization in fields we would now consider psychology and neurology.

The *London Practice of Physick,* in which this treatise is found, was published in 1685, ten years after Willis' death. Its editor, self-identified as 'Eugenius', informs the reader that this is intended to be used as practical guide. For this reason he leaves out Willis' more theoretical tracts, including his most famous work, *Cerebri anatome*, and even the more distinctly theoretical aspects of his practical essays such as *Pharamaceutice rationalis*. Eugenius is also responsible for translating these works from Latin to English, again to augment their use in the public sphere. This seems to imply that Willis' original publications were not easily accessible by this wider audience, and despite Eugenius' modifications, it still appears that without an understanding of Willis' system, the work remains fairly restricted to the educated classes. In the tracts on melancholia and madness alone, Willis' concepts of the two souls and the chemical, corpuscular nature of the animal spirits and blood underlie a great deal of what he says, yet they are not outlined for the general reader. Added to this is the knowledge of alchemical practice that would be helpful or even necessary to concoct some of his recommended curatives. Again, it would appear that the specialization and specificity of Willis' work is far more amenable to physicians and other natural philosophers of his bent than the general population.

This restriction to expert knowledge should be seen in contrast to works on mental disorder published in the earlier part of the seventeenth century; once again we call upon Burton's *Anatomy of Melancholy*. This older work is not so streamlined as *Pathologiae cerebri*, containing a great diversity of topics not immediately associated with a clinical diagnosis and the treatment of melancholia.[24] It is also based on the much older and commonly understood medical theory of the four humours, which immediately lends itself better to popular usage than Willis' novel synthesis of more recent developments in natural philosophy. Historian Michael MacDonald published an influential work within the history of psychiatry in 1981, which engages in a close textual and statistical analysis of the records of Richard Napier. In this work, *Mystical Bedlam*, he discusses the public's facility with identifying mental disorders, and indeed, setting up the parameters within which they could be identified at all.

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[23] Willis, *The London Practice of Physick*, 479.

[24] Burton, "The Anatomy of Melancholy", 159. Eds. Rothman, Marcus and Kiceluk list "sorcery, suicide, proper diet, demonic possession, the pleasures of hunting and traveling, lovesickness, jealousy and the hard lot of scholars" among the topics.

MacDonald argues that popular beliefs about insanity shaped Richard Napier's own judgment of the condition, and that this is evident in his medical records when close attention is paid. "Ever since antiquity," he writes, "insanity has been defined by experts but discovered by layman."[25] In the seventeenth and eighteenth centuries in England, laymen performed the tasks of identifying particular individuals as insane, seeking treatment for their disorder and pursuing legal action to manage their person, property and family. The physician may have written the medical records, but the relatives performed the preliminary "diagnosis" in order to present him to the doctor in the first place. Indeed, the language used to describe symptoms in Napier's casebooks is often borrowed directly from the people who placed the patient in his care. MacDonald conducts a complex statistical analysis of the symptoms used in Napier's consultations, noting forty-eight mental afflictions alone. The most common is "troubled in mind", appearing in 32% of the 2,483 total cases. Melancholy is next with 19.9%, while madness and lunacy had a combined tally of 5.5%.[26] Unlike what we saw in Willis' treatise on mental pathologies, Napier appears unconcerned with creating a 'diagnostic manual', maintaining a much more ambiguous use of terminology than would be amenable in the *Pathologiae cerebri*. MacDonald persuasively argues for the value of this sort of study among historians, as it attempts to view primary documents through the language and categories used by the people of that time: "Evidence is interpreted precisely for what it is – the outcome of a social encounter between a mentally disturbed person and another individual who was concerned with assessing the social normality of his thoughts and actions."[27] This method seems quite the opposite of Lawrence Babb's research methods in his work on Burton's *Anatomy of Melancholy*, if one will recall.

In assessing popular stereotypes of insanity, MacDonald first points out the flourishing of images of insanity on stage and in other forms of literature—Shakespeare's *King Lear* is a common example. The prevalence of these images leads MacDonald to remark that "from popular literature and reports of real madmen's behaviour, [the laypeople] learned a common vocabulary with which to describe the varieties of insanity."[28] Mad behaviour was characterised particularly by violence or even criminal action. Those identified as legally insane, however, were protected from harsher penalties for crimes, just like infants and idiots. MacDonald notes once more the influence of the lay opinion on identifying mental disorder: jurymen had to recognise whether laws were violated in an act of rationality or irrationality, and in these trials, experts were hardly ever consulted.[29] To the Elizabethans of this era, what made criminal acts of madness so particularly disturbing is that the madman threatened the same people and property that constituted his social standing. The view that one was a representative of one's household was dominant at this time, which meant that acts against this establishment were seen as dangerous. One small detail that hints at the precedence of the family and estate is that patients suspected of mental disorder were often tested on the basis of their ability to identify or name their relatives and friends.[30] The slightest signs of rebellion against the strict hierarchical order were often noted as a symptom of madness in Napier's records. MacDonald surmises that for the members of early seventeenth century English society, "people who attacked members of their households or rebelled against the dominion of

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[25] Michael MacDonald, *Mystical Bedlam: Madness, Anxiety, and Healing in Seventeenth-Century England* (Cambridge: Cambridge University Press, 1981), 113.
[26] Ibid., 117.
[27] Ibid., 115.
[28] Ibid., 122.
[29] Ibid., 125.
[30] MacDonald, *Mystical Bedlam*, 126.

their elders [...] repudiated the bonds that fixed them in the social and economic life of the community."[31]

An article by Richard Neugebauer exhibits the Elizabethan preoccupation with social standing in terms of court cases set to determine the protection of property owned or inherited by an individual who is or becomes mentally ill. He shows first of all that measures had been in place since the thirteenth century to extend the Crown's jurisdiction over such persons. Essentially, there were two definitions of the mad individual who would receive the King's protection in one of two forms—the 'natural fool,' who suffered from congenital defects, and persons *non compos mentis* who developed symptoms postnatal.[32] In the former case, the King would protect the plaintiff's land from exploitation, though he himself would keep the revenue and would also provide for the fool, but not his dependents, at a basic level. In contrast, persons *non compos mentis* would keep the revenue of his estate, but the Crown would be obliged to maintain the person and his family at the level of his social rank (e.g. an earl as an earl, a baron as a baron, etc.).[33] The Court of Wards and Liveries oversaw these cases between 1540 and 1646, the later date corresponding to Charles I's defeat in the civil war. By 1660, it was officially shut down by and its jurisdiction over persons with mental illness was given to the Chancery.[34] Statistics generated from documents covering the early seventeenth century reveal that the landed gentry account for forty percent of these claims, while most of the remainder consists of tradesmen, yeomen and agricultural workers. This shows that not only did the English government offer protection to the mentally disabled across social classes, but that these various people exhibit a mutual regard for ownership, property and inheritance.[35] The remainder of Neugebauer's article is an excellent piece of scholarly work, however it is out of the scope of this essay and shall have to be put aside.

Returning to Macdonald's text, the madman was also castigated for violent acts committed against his own more conventional property, such as his clothing. In the Elizabethan period medieval sumptuary laws were recalled by traditionalists in response to the improved social mobility of the lower classes. Many of Napier's records note that the patient wears rags or tears continually at his or her vestments. Thus there was a visual correspondence in the figure of the madman, as one who is stripped of reason and knickers alike.[36] In any case, trespassing these conventions of family and reputation was not merely unconscionable but terrifying for the Elizabethans, because they went against the very "rules that made normal violence predictable and comprehensible."[37] Violent madness was even more problematic for villagers due to their isolation and overall lack of security. As a result, detaining those suspected of madness in asylums became an important preventative measure, to which MacDonald makes an insightful remark: "The manacled lunatic was not a sign of the cruelty and stupidity of ordinary villagers; he was an emblem of their fear."[38] Taking all things under consideration, it appears that the madman was *widely* perceived as a threat to the way by which early seventeenth century England identified itself. MacDonald produces a very compelling argument for the social determinacy of madness in this

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[31] MacDonald, *Mystical Bedlam*, 128.
[32] Richard Neugebauer, "Treatment of the Mentally Ill in Medieval and Early Modern England: A Reappraisal" in *Journal of the History of the Behavioral Sciences* 14 (1978): 159.
[33] Ibid., 160.
[34] Ibid.
[35] Ibid., 164.
[36] MacDonald, *Mystical Bedlam*, 129-130.
[37] Ibid., 142.
[38] MacDonald, *Mystical Bedlam*, 123; 142.

period, demonstrating that it was not simply the physician or lawyer who gave the conclusive statement. Rather, there was a dynamic interplay between the laymen and experts, evident even in the language exchanged between them when dealing with medical or legal matters involving mentally disturbed persons.

Burton's *Anatomy of Melancholy* was quite successful during its time, and one may suggest that this is connected at least in part to its lack of philosophical rigour. In other words, this early text mostly spoke to the layman's experience of madness in that particular, Elizabethan community. MacDonald even points out that 'melancholy' became the fashionable word for the educated and noble classes to use in describing their own mental conditions.[39] In other words, Burton spoke in the vernacular of his age, and so the *Anatomy* could be more readily absorbed and dispensed by a culture that was simultaneously fascinated and terrified by madness. This may point to why the courts did not require experts to confirm the presence of mental disorder or not; there was not much they could add that would differ radically from accounts given by individuals long accustomed to ideas of humours and demonic possessions. What remains to be seen is how political and legal institutions were affected by the new developments in psychology produced by Thomas Willis in the 1660s, in the era following the abolishment of the Court of Wards.

Willis' account of mental illness was far more technical than anything seen before. As suggested above, the *Pathologiae cerebri* displays a level of specialization that could not be easily understood by individuals lacking education in the fields of alchemy or chemistry, anatomy, or indeed, the Latin language. Certainly Willis' books were successful amongst colleagues and other physicians, especially his work on brain anatomy.[40] Nonetheless, the extent to which the layman was able to speak on the same level as a physician or lawyer well versed in Willis' ideas as to the character of mental disorders would have been limited. In light of this, one may hazard that the identification of madness could gradually pass from the public sphere into a very specific field of expertise only after Willis produced his unparalleled work on the diseases of the brain. We can recognise this as a feature of modern society, in which mental illness is ultimately classified by psychiatrists, and indeed they are always called on to give an 'expert's opinion' in court. It would be well worth it to investigate the Crown's identification and treatment of mentally disturbed persons with respect to Thomas Willis' new, methodologically and philosophically cohesive account of psychology articulated in the latter half of the seventeenth century.

All in all, the debates surrounding Galenic medical theory did not come to fruition until Thomas Willis' imaginative and empirically substantiated reconfiguration of physiology in chemical terms. For this reason, early seventeenth century English texts discussing mental disorders still rely heavily on the humoural system because there was no equally or more coherent system to replace it yet. The ambiguity of the language employed by these earlier texts to discuss conditions such as melancholia and madness worked very well with a layman's understanding of the disease, and subsequently in his application of those terms to individuals within his own community. While certainly captivated by the image of the madman in literature, Elizabethan England nevertheless deemed such persons dangerous to the social norms that upheld its way of life, especially in terms of family and property. This paper suggests that Willis' brilliant work could not be appropriated as easily by society due to its technical precision and philosophical underpinnings. One may tentatively place his work on mental pathologies as the turning point on which the identification and characterisation of madness passed from the widely shared framework

[39] MacDonald, *Mystical Bedlam*, 152-153.
[40] Zimmer, *Soul made Flesh*, 186.

of societal norms to the specialists. This would complement the increasing institutionalization of mental illness during the eighteenth century and beyond.

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