

Morbid Anatomy: Matthew Baillie, M.D. F.R.S
Dissecting Humanity: The Intersection of
Dehumanization, Grave Robbing, and the Importance of
Human-Centered Care
An Analysis of The Morbid Anatomy of Some of the
Most Important Parts of the Human Body

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Historical Introduction

Raised by eclectic medical men during the Age of Enlightenment (1685-1815), Matthew Baillie's (c. 1761-1823) work in anatomy and pathology, particularly his studies on the structure of the human body and disease, was influenced by the era's emphasis on reason, scientific exploration, and empirical observation. He was a Scottish physician and anatomist best known for his detailed anatomical drawings and systematic approach to morbid anatomy—the study of the structural changes in the body caused by disease—during the time of limited access to cadavers. At an early age, Baillie inherited an impressive collection of anatomical specimens within the famous Windmill Street School of Anatomy and the Hunterian Museum from his uncles, William, and John Hunter (Bellis, 2020, p. 40). Baillie had access to thousands of specimens and bodies, which provided a vast foundation for his observations. This enabled him to draw connections between morbid appearances and their manifestations. Baillie created one of the first works that linked pathological changes in organs to specific diseases, *The Morbid Anatomy of Some of the Most Important Parts of the Human Body*. (1965) (*Morbid Anatomy*) He refined his “ability to observe and access accurately and to discourse clearly and succinctly on the salient features of a subject (Bellis, 2020, p. 40).” Baillie helped pave the way for modern pathology and broader medical advances by presenting and understanding disease without relying on prior knowledge of a patient's history or theoretical explanations. This approach set him and *Morbid Anatomy* apart from his predecessors during the Enlightenment period.

With the evolution of medicine, many of Baillie's predecessors, both before and during his time, believed that case studies were the most effective way to disseminate medical knowledge. Case study use can be seen in Giovanni Battista Morgagni's (c. 1682-1771) *De sedibus et causis morborum per anatomen indagatis*. (1761) *De sedibus* consisted of seven hundred cases of disease and dissections and relied on making correlations

between the patient's account and postmortem discoveries (Ghosh, 2017). Morgagni's work and that of others were frequently characterized as lengthy, highly technical, and difficult to digest although arguably more holistic and human centric as it focused on the individual. Baillie honed his skill in articulating his findings concisely, using simple language to articulate his knowledge, making it more useful and accessible for all readers. Baillie believed that using case history defeated the purpose of learning and applying anatomy in the art of medicine since they are often too comprehensive and difficult to consult (Baillie, 1797, p.viii). He structures *Morbid Anatomy* as a work that describes the appearance of diseases, with an emphasis on making it a convenient and intuitive reference. This treatise uniquely highlights which observed morbid changes are common versus rare, as well as addressing misconceptions of disease perceived through individual cases. "His work shows the accuracy and clearness of his judgment, his minuteness of observation, and his acuteness in referring facts to their true causes amidst the complicated phenomena presented by diseased organs (Finkel, 1965, p. 67)." Baillie's focus was on the direct examination of anatomical specimens to identify disease patterns. This approach offered a more empirical method of studying pathology, which was a significant advancement in the field of medicine at the time. Before the Enlightenment, medical understanding was heavily influenced by humoral theory, which is the idea that the balance of bodily fluids governed health and religion/superstition. The balance of these bodily fluids corresponds to the different aspects of an individual's personality, emotions, and physical health. Baillie's approach shifts the focus from purely theoretical or speculative ideas to a more systematic, observable, and evidence-based understanding of disease, aligning more closely with the ideals of the Age of Enlightenment. However, this also means that Baillie' departs from the more human-centric approach as it strays from placing the human being at the center of understanding health and well-being.

Today, one of the important challenges faced by physicians and scientists is the ability to effectively convey their findings to patients or the general public. As stated in the preface of his work, Baillie believed that most of his peers and predecessors had failed to do so, which may have been one of the reasons why he strayed away from such methods as the case-study approach since it was not inherently seen as applicable. In that sense, this treatise introduced a new way of presenting and learning medicine, the study of "pathologies without the person." Baillie's *Morbid Anatomy* reveals how he believed that the body itself could serve as a source of empirical evidence in studying anatomic pathology, arguing that patient history often contributed to inaccuracies and misconceptions in interpreting findings. Thus, this means that this modality of dissemination, which relies on patient history, loses its power of external validity and generalizability. The question is whether this approach is appropriate for effectively disseminating medical information, particularly in the context

of modern practice. Pathologists today have a unique role, with little direct patient interaction.. Moreover, the study focuses more on identification skills and recognizing signs and symptoms without the patient, which reflects how Baillie presented his expertise by promoting “mechanization,” viewing human bodies/experiences through the lens of processes or systems, and “objectification,” seeing patients as objects to be studied. This paper will explore the modalities in which Morbid Anatomy serves to disseminate medical knowledge and examine whether its approach to mechanization and objectification of diseased parts applies to patient care or contributes to the dehumanization of disease.

The Author

Shaped by the Age of Enlightenment, Matthew Baillie was born into a family of prominent medical men on October 27, 1761. His mother, Dorothea, was the sister of William Hunter and John Hunter, influential figures in medicine who were known for their contributions to the field of anatomy and surgery during the 18th century. Baillie attended Glasgow University for his Bachelor's in 1783 and earned his Doctor of Medicine at Balliol College, University of Oxford, in 1789. Although many medical historians simply remember Matthew Baillie as the nephew of William and John Hunter, Baillie has made a name for himself in his own right as an anatomist, physician, pathologist, and lecturer. From inheriting his uncle William Hunter's school of anatomy, having access to John Hunter's collection, and working at St. George's Hospital, Baillie had the means and resources to become successful. Dissatisfied with the anatomical approach his predecessors and peers utilized when viewing diseases, Baillie became “more clinically oriented endeavored to correlate the lessons with symptoms during life (Biggart, 1974, p. 444).” Baillie meticulously observed morbid anatomical changes, driven by the desire to share his findings with others, knowing not everyone had access to the same resources or opportunities for dissection. Through his work, he advocated for the idea of accessibility of anatomic pathology, proposing the creation of a handbook or manual that could be serve as a practice resource for understanding and learning about morbid appearances—those relating to or characterized by disease, Baillie flourished under William Hunter's tutelage, and upon his uncle's death, inherited not only Hunter's passion for anatomy but his famous Windmill Street School of Anatomy as well (Thomson, 1942, p. 387). His access to expensive anatomical collections and his strong educational background allowed him to make key observations and develop a comprehensive understanding of anatomy and morbid structures. Furthermore, his drive to share his findings with those lacking similar resources motivated him to create Morbid Anatomy.

The Ethical Issue

When considering the historical context that led to this work's publication, *Morbid Anatomy* gives readers a better understanding of anatomical changes in morbid structures during the time of inadequate supply of cadavers. Baillie's desire to disseminate his medical knowledge to address misconceptions regarding morbid anatomy and provide a means of study brings to question the professional ethos of disseminating medical knowledge. In *Morbid Anatomy*, Baillie emphasizes his departure from the use of case studies in preference of a novel approach of presenting medical knowledge that removes the patient from the study of pathology, as he believed the case study approach was distracting. Instead, *Morbid Anatomy* addresses a critical area in health; presenting observations in a way that is not tied to specific individuals, making the work more accessible and applicable to various scenarios. Through his rhetorical style and the credibility he establishes, Baillie crafted *Morbid Anatomy* with practical and instructional intent, raising questions about the ethos of separating disease from patient history.

The study of anatomy in England is known for infamous body snatching and excavations, highlighting how difficult it may have been to study anatomy with limited access to cadavers (Mitchell et al., 2011, p. 91-99). The relative shortage of cadavers and the growing number of anatomists and medical students resulted in high demand for corpses, thus the birth of the lucrative trade for resurrectionists. The Murder Act of 1752 was passed and was in place until 1832, when it was repealed. The act served as a punishment for prisoners convicted of murder, establishing the systematic procedure for execution and postmortem punishment by public dissection and then hung in chains, gibbeted (Tarlow and Lowman, 2018, p. 8). "Then corpses were carted off to the much more secluded anatomy rooms where they would be dissected to their extremities, that is, until there was nearly nothing left, by surgeons or groups of medical trainees (Tarlow and Lowman, 2018, p. 8)." As stated before, resurrectionists often took corpses and sold them to anatomy schools such as The Great Windmill Street School, which Baillie inherited at the early age of twenty-two (Thomson, 1942, p. 387). Through his studies at the school as well as observing William Hunter's specimens and preparations, Baillie created a systematic treatise that was "the first attempt to treat pathology as a subject in and for itself (Thomson, 1942, p. 387)." Baillie also had access to John Hunter's extensive anatomical collection, which had over 13,000 human and animal preparations (Mitchell et al., 2011, p. 91-99). However, given the methods of corpse procurement and preparation, it was impossible to create "case histories" for these cadavers and specimens, which also may have influenced Baillie's approach in creating his work. While Baillie himself may not have directly engaged in these unethical practices, his work was still a product of the cultural and medical environment that relied on morally questionable methods that was widespread and difficult to avoid. Moreover, the use of these cadavers and prepared specimens, most procured through grave-robbing or other

unethical means, might have also contributed to the clinical detachment from the human person. Thus, this led to his novel approach of presenting his extensive observations and knowledge focusing on diseased appearances and their manifestations, without the patient's history, while recognizing the demand for the dissemination of his findings.

Fortifying his credibility was essential when it came to the reception of his work, considering how it challenged the practice of case histories. Baillie outlined his work in a way that presented himself as an exemplary empiricist and "purposefully employed the rhetoric, and organization and descriptive techniques of William Hunter's *An Anatomical Description of the Human Gravid Uterus* (Belli, 2020, p. 42,57)." The structure of the work, organized by organ systems, along with vivid descriptions that engage all the senses, allows readers to visualize the subject matter through Baillie's unique perspective. In many instances, Baillie often refers to certain observations as his own, stating "I believe" before his claims based solely on observing decomposing persons and their parts. Due to the subjective nature of personal observation, it inherently lacks the broader empirical evidence required to establish it as a universally reliable resource. Thus, the need to establish credibility early on and he invites readers to view his insights as one perspective among many, rather than absolute truths. In the preface of his work, Baillie highlights sources of inaccuracies and how some are unavoidable when it came to creating his work (Baillie, 1797, p. xi). *Morbid Anatomy* also addresses several issues he noticed from the works of his predecessors, highlighting how this work helps clarify existing misconceptions. This style encourages critical thinking allowing for room to further both inquiry and dialogue.

The primary intent of *Morbid Anatomy* is to explain structural changes in more detail than his predecessors. He argued that existing works were often difficult to procure, composed of extensive collections, and difficult to read to justify his approach. Case studies involved the record of treating individual patients during their illness, and postmortem examination was performed after their death. The work celebrated at this time was by Giovanni Battista Morgagni (c. 1682-1771), *De sedibus et causis morborum per anatomen indagnatis* (1765) (*De sedibus*), an extensive collection of seven hundred postmortem examinations presented in cases (Bellis, 2020, p. 40). Comparing the language and structure used in the *De sedibus*, "The observations, (for I will begin with them in order to preserve nearly the same method which I made use of above) the observations, I say; I mean those which I have observed to have been omitted in the *Sepulchretum*, from the ancient or more modern authors though they might have been included; and those moreover that have been made public since the second edition of this work; I have pointed out each under their proper heads, in as great number as occurred to me when writing," is considered a shorter sentence in Morgagni's work. There were many criticisms of Morgagni's Latin, intricate, and obscure writing style (Jarcho, 1948, p. 510). When quoting one of Baillie's descriptions, "I once had an

opportunity of seeing two or three scrofulous tumors growing within the cavity of the pericardium, one of which was nearly as large as a walnut. They consisted of a soft white matter, somewhat resembling of curd, or new cheese (Baillie, 1973, p. 9)." Baillie's language is succinct and clear, employing a first-person perspective to directly indicate when the observations are his own, laying the groundwork for later medical breakthroughs. *Morbid Anatomy* was one of the first works to present detailed descriptions of the pathological changes that diseases could cause in organs, such as the liver, heart, lungs, and brain. Baillie not only provided written descriptions but also accompanied his text with illustrations, which was revolutionary at the time. These illustrations helped clarify the connection between symptoms and the underlying pathological conditions that caused them allowing for better understanding and diagnosis of diseases. Moreover, in his descriptions, he often makes comparisons to common objects as a means for readers to visualize and sense what he has observed. As read, *Morbid Anatomy* presents the subject in a "concise, and readable form for all practitioners of medicine and surgery, and perhaps more so than any previous work, established pathology as one of the medical disciplines (Finkel, 1965, p. 92)." However, examining the descriptions he made to describe his findings reveals an ethical issue of the dehumanization, the clinical detachment that prioritizes the pathological aspects of the body over the person. Through his comparison to common things, it reveals the perspective Baillie had when observing these preparations and cadavers. Through the lens of mechanization and the thought of patients as interacting systems, Baillie uses descriptions of common objects and takes a depersonalized view of pathology to foster a new understanding of the diseases.

The sociocultural context which took place during the time that influenced Baillie's work during this time is vital to analyze since it helps readers better understand the motivation and intentions behind *Morbid Anatomy*. Considering Baillie's access to vast collections and how they were obtained helps support the rationale for not utilizing the traditional case-study approach and also highlights the progressive nature of Ballie's work and dark realities of this period. Moreover, the access to resources also helped improve his credibility, considering he is one of the only fortunate individuals to form his observations based on "solid experience and penetrating knowledge (Forbes, 1979, p. 508)." Separating the contents into twenty-six chapters, he assigned each chapter to a specific region of the body, starting with the pericardium and ending with the brain. In each chapter he provides a concise description of each structure, including details about its appearance and associated diseases. Baillie's writing can be described as concise and "creates no other feeling than that he wrote only for the purpose of conveying information (Wardrop, 1825, p.28)." He clearly defines the morbid appearance and condition, which arose from using identifying words that allow readers visually and haptically sense these structures. Baillie's work and writing style can only

be fully appreciated through “perfect knowledge” of the subject, which enabled him to create a more cohesive and concise piece, in contrast to the fragmented nature of extensive case history collections (Wardrop, 1825, p.29). Baillie’s approach, which advocates for understanding and learning about disease without relying on patient history, offers a more objective perspective on the practice of medicine—one that carries significant implications when put into practice.

The Application

Although there are more effective approaches to medicine, Baillie’s ideas are still relevant not because they are directly applicable in modern times, but they mark an essential step towards more evidence-based and empirical methods that we utilize today. The physicians that heed Baillie’s work “will be able to guide himself on such knowledge zin...and also inform others,” which emphasizes how this work serves an instructional purpose (Baillie, 1797, p. v). Aware that many did not see the application of morbid structures to the care of patients, Baillie postulates that these observations “may, too, lead him to a proper method of treatment,” suggesting this work may be of value in the practice of medicine (Baillie, 1797, p. v). In addition, the work also serves as a way for readers to become more acquainted with disease appearances for more accurate observations and data regarding research and case studies. Prior to Baillie’s work, the study of pathology was rudimentary, so Morbid Anatomy marked a significant shift towards recognizing patterns and documenting how disease change’s structure and function of organs. Many of his findings and observations still hold true today through his general approach to the study of pathology and its application in the field of medicine. For example, his findings in regards to inflammatory diseases, such as tuberculosis and pneumonia and its effects on the lungs are still relevant and mentioned in research today (Baillie, 1973, pg. 25-28). However, this leads to the question of whether Baillie’s intentions and approach of “pathologies without the person” is the best teaching method for the study and practice of medicine or if it promotes dehumanization since it does not take into account the needs, emotions, and histories of the patient.

Baillie believed there should be an emphasis on the study of morbid anatomy. There was no morbid anatomist until Baillie (Bellis, 2020, p. 40). He developed the systematic treatise, *Morbid Anatomy*, which serves as the foundation of understanding as it describes the evidence of disease. As a systematic science, morbid changes of internal organs, when known and identified, “the attempt to detect these changes during life naturally followed (Payne, 1897, p.1247)”. *Morbid Anatomy* introduced a new way of studying and presenting pathology and medicine. The mode of presentation is still evident today in resources like the Merck Manual and handbooks that offer a comprehensive overview of complex diseases, aiding in the recognition and diagnosis of various conditions. Additionally,

the ability to make a physical diagnosis was significantly advanced by Matthew Baillie, regarded as the first systematic writer on morbid anatomy, whose work provided essential evidence for this practice (Payne, 1897, p.1248). Sir Henry Halford, Baillie's friend, described how Baillie's attention to morbid anatomy "enabled him to discriminate between symptoms and distinguish diseases nearly resembling one another (Payne, 1897, p.1248)." Although Baillie's keen observation skills and vast knowledge of morbid anatomy contributed to his successful medical practice in London, Halford harbored doubts about their practical application. Halford believed it could be dangerous for those lacking the same knowledge or experience to apply such practices. (Payne, 1897, p.1248). As seen in the modern evolution of the field of pathology, pathologists serve a specialist role in which patient interaction is limited. Dehumanizing practices in medicine such as treating patients as mere cases or numbers, result in serious ethical implications such as the loss of empathy. When viewed only through the lens of the symptoms or disease, it results in the neglecting emotional, psychological, and social needs of the patient resulting in poorer health outcomes. This statement brings attention to the approach in which Morbid Anatomy is presented, pathology without the patient, and the strengths and weaknesses of this modality of pathologists' training and their role in patient care today.

From Morbid Anatomy, significant contributions to the pathology study influenced his association with disease and morbid structures. For example, "Alcoholism results in scarring of the liver and cirrhosis. He also describes the pathogenesis of aortic aneurysm and the appearance of lungs in emphysema (Forbes, 1979, p. 508). The modern manifestations in which these books were created reflect Baillie's display of his experience and its applications, best represented by the study of anatomic pathology in its contemporary form. His book provides students and medical practitioners an improved method for identifying and differentiating between diseases with similar signs or symptoms. However, it promotes viewing patients as mechanical systems, where parts, organs, and appearances are primarily used for diagnosis. While there are benefits to being aware of these morbid structures and appearances, the exclusion of patient history risks dehumanizing the disease, reducing patients to mere objects in the diagnostic process. Some of the main criticisms that Morbid Anatomy had during its time contemporaries pertained to Baillie's deliberate disregard for the genre of case history (Bellis, 2020, p. 40). Due to his unique position of having access to specimens and cadavers, he did not have the means to consider patient history and, therefore, could not utilize this model. He argued that case history was not necessary to identify and understand morbid appearances. However, through this method of study and dissemination of knowledge, Morbid Anatomy became a valuable resource for future pathologists and physicians, offering an approach rooted in detaching the patient from the pathology.

In the context of modern pathology and its application in patient care,

there is now a greater emphasis on understanding disease itself, rather than focusing on the treatment of patients. When breaking down the word “disease, with “dis,” meaning “apart,” it suggests that the patient suffering from the disease is separated from “ease or well-being.” This concept underscores that disease cannot exist without the patient, revealing a flaw in Baillie’s approach: Morbid Anatomy focuses on the study of pathology without considering the person as an integral part of the learning and teaching process. From a modern perspective, pathology is distinct in that pathologists do not treat patients directly; instead, they act as consultants to clinicians. There is now a greater emphasis on developing skills such as grossing, which involves inspecting and processing specimens, particularly since grave errors often arise from misidentification—an issue Baillie aimed to address in his treatise. The need for problem-solving is a key advantage of mechanization and objectification of patients in pathology (Haque and Waytz, 2012, p. 178). When examining a patient, pathophysiological findings often necessitate disregarding the patients’ mental state, as it may distract from drawing connections between symptoms and disease, as highlighted by Baillie and his argument against case-studies. Considering the morbid anatomical approach to medicine, this can be compared to the functional demands intrinsic to the profession (Haque and Waytz, 2012, p. 178). The hands-off approach of pathologists is still seen today since their findings are communicated through primary care doctors and nurses, which may be attributed to how they learn, train, and practice (Allen, 2023). That said, this approach may also diminish from the patient’s experience and may hinder the improvement of health outcomes by neglecting interpersonal warmth and disregarding the patient’s inner life and subject experiences.

Regarding possible corrective measures that can be taken to address flaws in this approach of practice and education, it is important to address the current perspective of pathologists and disease. The patient’s experience plays an important role in their response to treatment. Moving towards patient-centered pathology by including more personalized measures when reporting findings, can help reduce the dehumanization of diseases in the field. An intervention in patient care would be to promote transparency in how findings are communicated, while reducing the practice of dehumanization and objectification in medicine. One approach to addressing the underlying causes of dehumanization is through personification (Haque and Waytz, 2012, p. 183). Personification in pathology can humanize observations by attributing personal characteristics, while attaching faces to preparations and samples adds a personal connection. In a study, they found that radiologists who assessed scans with patient faces could provide more accurate diagnoses, thus improving the quality of care and health outcomes (Haque and Waytz, 2012, p. 183). This human-centric approach can be especially useful to remind practitioners of their patients’ human nature in order to minimize mechanization and the moral disengagement that contributes to

dehumanization, especially when considering how modern pathological science now integrates genetic, molecular, and cellular approaches to understanding disease.

Conclusion

In conclusion, many of the topics discussed highlight how the novel approach in Morbid Anatomy reveals implications of how medical knowledge is presented and its effects. Although subtle, Baillie's intentional departure from the case history genre addresses a common issue in modern medicine, particularly in pathology: the functional dehumanization of patients. The issue stems from the lack of direct patient interaction and the mechanistic "problem solving" approach, which may be a disservice to the field of pathology and patient care. The way medical knowledge is conveyed in Baillie's treatise and during this time, although foundational, reveals a weakness in the current style of learning and application in the modern field of pathology, calling for a shift toward more human centric and holistic approaches to medicine.

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