

THE BODY POLITIC: SPLITTING GENDER MEDICALLY
IN EIGHTEENTH-CENTURY PHILADELPHIA

A Thesis

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PREFACE

“For it takes two to make a medical encounter – the sick person as well as the doctor; and for this reason, one might contend that medical history ought centrally to be about the two-way encounters between doctors and patients.”
- Ray Porter (1985, 175).

Within the two-way encounter of a patient and a physician, each brings to the encounter not only two distinct bodies – the body in need and the body attending to it – but also, each brings two body concepts based in factual knowledge as well as personal history, beliefs and identity. Both knowledge of the body as gained through observation of our physical-material world *and* personal beliefs derived from culture and individual experience affect how we treat our bodies, and how we treat the bodies of others. In the case of medicine, the physician’s body concept influences the diagnosis and prescription just as does the physician’s knowledge of anatomy and disease. But to what extent?

A short tale illustrates the connection between anatomical knowledge and body concept. A few years ago, a dear friend of mine was sitting in an introductory human anatomy and physiology course at college. It was her first science class since grammar school. To the fleshy professor’s side stood a human skeleton supported by metal scaffolding, articulated with brackets, small nuts and bolts. The professor asked if anyone could tell by looking whether the skeleton was male or female. A joker in the back mumbled something about the lack of a certain bone and my friend said louder, and sincerely, that the skeleton had belonged to a woman. A woman indeed, the professor admitted, but did my friend know why that was the correct answer?

“Because I counted, and there are only twelve ribs on each side,” she replied, confident of this fact. “The male skeleton has thirteen ribs.”

My friend's knowledge of anatomy was limited to her personal experience and observation of the external anatomy of herself and others. This body concept was contained securely, at least until that moment, within a molding of her family's devout Catholic background. Body concept is part of one's larger world view, and similar kinds of relationships between body concept and world view can be seen in medical literature throughout history. Over 450 years earlier, the famous anatomist Andreas Vesalius conceptualized the uterus as being in every physical way similar to the penis and testes, although inverted and contained inside the body cavity. By 1829 Carl Ludwig Klose, following the new ethos emerging in the mid-1750s, emphatically rejected Vesalius' view stating that the uterus has no analogy in a man (Klose 1829) and he believed comparison of it to male sex organs is worthless (Schiebinger 1986, 53). While a lot of things changed from the Renaissance days of Vesalius to the Victorian days of Klose, the basic structure of the human sex organs was not one of those things. Both men were skilled anatomists and careful observers, and had intricate knowledge of the organs. Put in another way, the organs being observed had not changed, and neither did the men's observations. However, the interpretations of the two anatomists stand in complete opposition. The body concept had changed under the influence of changing society, while the biological knowledge remained intact. Just think about how medicine started to treat people differently as major historical shifts in body concept have taken hold: successful blood transfusion could not be achieved until after the circulation of blood was correctly traced – a feat attributed often entirely to William Harvey in 1628 despite the numerous individuals who laid the ground work for his important publication. It was Michael Servates, much less renown than Harvey, who first accurately described the pulmonary

circulation. Harvey's own professor, Hieronymus de Aquapendente, discovered the valves which prevent backflow in the lower-pressure venous system as blood makes its way back to the heart. Now, just imagine how medical treatment will change in the future as we continue to explore the microscopic world of DNA and the processes of cell replication. This thesis explores a specific setting in early American medical history and offers a method for exploring the link between body concept and the patient's lived experience.

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ABSTRACT

Before the rise of clinical medicine, Western medicine was undergoing several prerequisite shifts in epistemology and methodology – moving from an eighteenth-century practice of spaces and classes, wherein the symptom is synonymous with the disease, toward a nineteenth-century science of signs and cases, in which symptoms are symbols, or products, of a deeper disease (Foucault 1973). During the former age of classes, about mid-century, a particular shift in the medical perception of sex differences appears in the literature, without any great advances or revisions in human anatomical knowledge or treatment methods. This thesis looks at hospitalization of in-patients at Pennsylvania Hospital spanning 50 years during which this shift in medical body concept took hold in European medicine, and was transmitted to American medical students educated in England and Edinburgh. A correlated change in medical practice is expected after major changes in either medical knowledge or in medical body concept occur.

Generally, no significant difference is found in the records of the kind of treatment administered or length of hospitalization of in-patients during the time period analyzed. However, women did experience longer hospitalization for most diagnostic categories. A correlation exists between men hospitalized for increasingly longer periods while a much higher proportion (by 45 percent) of pay patients to poor patients were being admitted after 1783. More research on pay and poor patient demographics is needed before a conclusion on this point may be drawn.

This thesis suggests that the lived patient experience may not reflect the image presented by contemporary medical literature. The patient records do appear to indicate that a contrastive view of anatomical sex differences was influencing lengths of hospitalization between men and women. This difference is most visible among lunacy

cases, in which the author shows patient autonomy is reduced while the physician's power is inversely increased, and thus the medical body concept more strongly affects the course of treatment. Future research at Pennsylvania Hospital may need to extend into the nineteenth century when hospital records begin to include more complete and detailed information about individual cases. Similar studies at other contemporary hospitals in America and Western Europe may also shed light on the links between patient experience and medical practice advocated in literature.

INTRODUCTION

A shift in anatomical knowledge occurs in the mid-eighteenth century in European medicine placing a much greater emphasis on sex differences between men and women's bodies – in every organ, tissue and physiology (Schiebinger 1986). It is a simple step to then conjecture that during the last half of the century there would begin to be an increasing difference in how men and women were treated for the same diseases, based on the medical and scientifically-supported belief that their bodies are built differently and respond differently to environment, lifestyle and treatment. But there is no such easy waltz for testing this hypothesis. One difficulty is the lack of a comprehensive investigation into the medical literature known to and written by physicians and actual medical treatment performed in the same hospital in which these physicians practiced. Studies focusing on the shift in knowledge of sex differences (Schiebinger 1986) investigate anatomy texts, medical illustrations, history books and physicians' writings. Studies which look at hospital and public health records from the eighteenth century (Cherry 1972; Smith 1977; Hardy 1988) tend to focus on mortality rates and overall public health rather than differences between the sexes. Studies dealing with women's healthcare from this century often focus on the emergence of obstetrics in medicine, and the professionalization of the male obstetrician at the expense of losing traditional midwives and folk-healers (Morantz and Zschoche 1980; Poovey 1986). Barbara Duden's (1991) look at the medical treatment of women in an eighteenth-century German town and applied her theory to actual cases of medical treatment recorded in a physician's casebook. However, her study only discussed treatment of women, and does

not include any male patient examples. Still, each of these previous studies provides valuable parts for building a lens through which to peer into the past.

The first step is to back out of today's medicine of processes, population genetics and germ theory, and try to get at the medicine and society of a single city in the eighteenth century. The Pennsylvania Hospital was chosen – as the first hospital in America – because its administration has kept their original records, and the hospital's story is well-documented by historians from every decade and paradigm since Benjamin Franklin¹.

Depending on what one reads, there may be two juxtaposed images painted of Western biomedicine in the last half of the eighteenth century. One is of ever-increasing progress in knowledge and techniques despite the lack of modern tools. The other is a drab and disgusting image of citizens dying from terrible infections, and of the most highly-educated physicians employing ghastly regimes of tortuous treatment of bleeding, purging (to induce vomiting), fasting, restraining by jackets and chains, lancing and cutting. The latter view is compounded when literature focuses of the medical treatment of women, with many contemporary historians, sociologists and anthropologists accusing professional medicine of the eighteenth and early nineteenth century of controlling women by putting them medically and scientifically “in their place” as the weaker, more dependent sex. Such a pessimistic view of the period seems widely held today even though it is understood by historians that “little is known about what hospitals actually

¹ Franklin published “Some Account of the Pennsylvania Hospital” in 1754, chronicling the general history of the hospital from its conceptualization to its founding and its first three years of operation. Another more exhaustive history was published by Dr. Thomas G. Morton in 1895, and this text is cited often in histories of the hospital written ever since.

did...[and] detailed studies of individual hospitals are needed before any generalizations can be attempted” (Abel-Smith 1964, x).

Scholars since the 1960s have looked at individual hospitals, and economists in particular have analyzed hospital mortality rates as well as the hospitalization rates, for in-patients to interpret hospital utility and explore whether patient treatment reflects the image of medicine presented in historical literature. E. M. Sigworth’s 1966 study of “A Provincial Hospital in the 18th and Early 19th Centuries” concludes that the image of eighteenth-century hospitals “stands in a more favourable light when attention is focused upon the actual records of the hospitals themselves and on the patients which they treated.” This thesis compares medical concepts and knowledge recorded in literature to actual medical treatment in hospital records. The literature represents a history while the patient records represent a lived past, much like artifacts from an archaeological site (see Stahl 2004). A sample was taken from the patient records of Pennsylvania Hospital in Philadelphia from its opening in 1752 to 1801. Data were collected on mortality and cure rates of male and female in-patients for eight diagnostic categories. Average hospitalization times for men and women were analyzed and used as an indicator of different treatment. Whereas other social and cultural factors have been identified – and rightly so – in numerous studies as major currents affecting medical behavior, this project searches for a visible link between the shift in the medical body concept and changes in medical behavior at Pennsylvania Hospital.

The search for this link must also consider the pattern of population growth and mortality rates in Philadelphia over the six decades between 1752-1801, as well as about the availability of institutional facilities for the sick – which by no means represent the

entire spectrum of health-care options nor resources utilized by the public, as female family members, midwives, patent medicine sellers, barber-surgeons, private physicians for the well-to-do and apothecaries also existed at the time. These options as they existed in Philadelphia will be more fully explored in Chapter Three. Some challenges arise in the reconstruction of health and mortality of eighteenth-century Philadelphia due largely to problems of classification. Just how many different diseases, for example, are encompassed by the eighteenth-century categories “fever” or “lues venerea”? The physicians then distinguished between kinds of fevers, identified as “intermittent” or “remittent,” whereas today fevers are symptoms of multiple pathological or infectious conditions. Several cases may be lumped together as “lues venerea” for an eighteenth-century doctor that would be distinguished today as either syphilis or gonorrhea. The problem of understanding eighteenth-century disease concepts continues after life, in the bills of mortality. When cause of death is mentioned in hospital records, was it indeed the cause of death, an attending factor to it, or just a symptom of a hidden disease? The medical knowledge of disease will be elaborated upon while discussing the education of Philadelphia’s physicians in Chapter Two. Patients brought with their bodies their own ideas about disease and how it should be treated. Many of their eighteenth-century folk concepts, and professional concepts of the doctors, seem strange in today’s context. Also, the very situation of the hospital within society differed much from today, and these differences need to be described in a reconstruction of the eighteenth-century medical body concept. Then, finally, we are prepared to face medical treatment as recorded on the books, and engage the reality of medical behavior at Pennsylvania Hospital. Chapter Five analyzes the results from patient records and then reexamines the historical literature

to look for links between the actual treatment of patient experience and the medical concepts of the physicians. Discussion in Chapters Six, Seven and Eight focus upon using the results to adjust the historical image of patient experience at Pennsylvania Hospital in the eighteenth century.

LITERATURE REVIEW

I

Historian Londa Schiebinger (1986, 42) recognizes the beginning of a movement in eighteenth-century Europe “to define and redefine sex differences in every part of the human body” through the illustrations and literature of anatomy, physiology and osteology. This sexual redefinition may be considered one episode in a larger “sociogenesis” – that is, a culturally-based, historically constructed ideology – of the human body as it is conceptualized in Western cultures today (Duden 1991; King 1998). By and large, sixteenth- and seventeenth-century anatomists did not focus much upon biological sex differences. Even the most influential of them such as Thomas Willis, Thomas Sydenham and William Harvey had little to say about female anatomy as opposed to male. These anatomists chose to represent the human body in idealized drawings in which the fundamental premise held that every organ in a woman is analogous to its counterpart in a man. The 1750s began to see a shift away from this analogous method of description, with people such as Edmond Thomas Moreau (1750) who wrote “A Medical Question: Whether Apart from Genetalia There is a Difference Between the Sexes?” Literature began appearing in France and Germany calling for finer delineations of sex differences. By the eighteenth century such literature and illustrations were widespread and standard material in universities, scientifically reinforcing the socially-constructed claim that women are built for a natural purpose, motherhood and propagation (Schiebinger 1986, 53). The shift described by Schiebinger appears in the works of William Chelselden (1733), Marie-Genevieve-Charlotte Thiroux d’Arconville (1759) and Samuel Thomas von Soemmerring (1796). Medical and anatomical

illustrations of this period continued to follow the tradition of using classical sculptures and artistic techniques to build ideal representations of what the human body should look like. This tradition solidified during the Renaissance when prominent scientists were also artists, such as Leonardo da Vinci and Andreas Vesalius. The tradition also serves as evidence of Western art's and biomedicine's shared heritage. Artists use the idealized body as a measure of beauty, while physicians use the idealized body as a measure of health (see Gilman 1995).

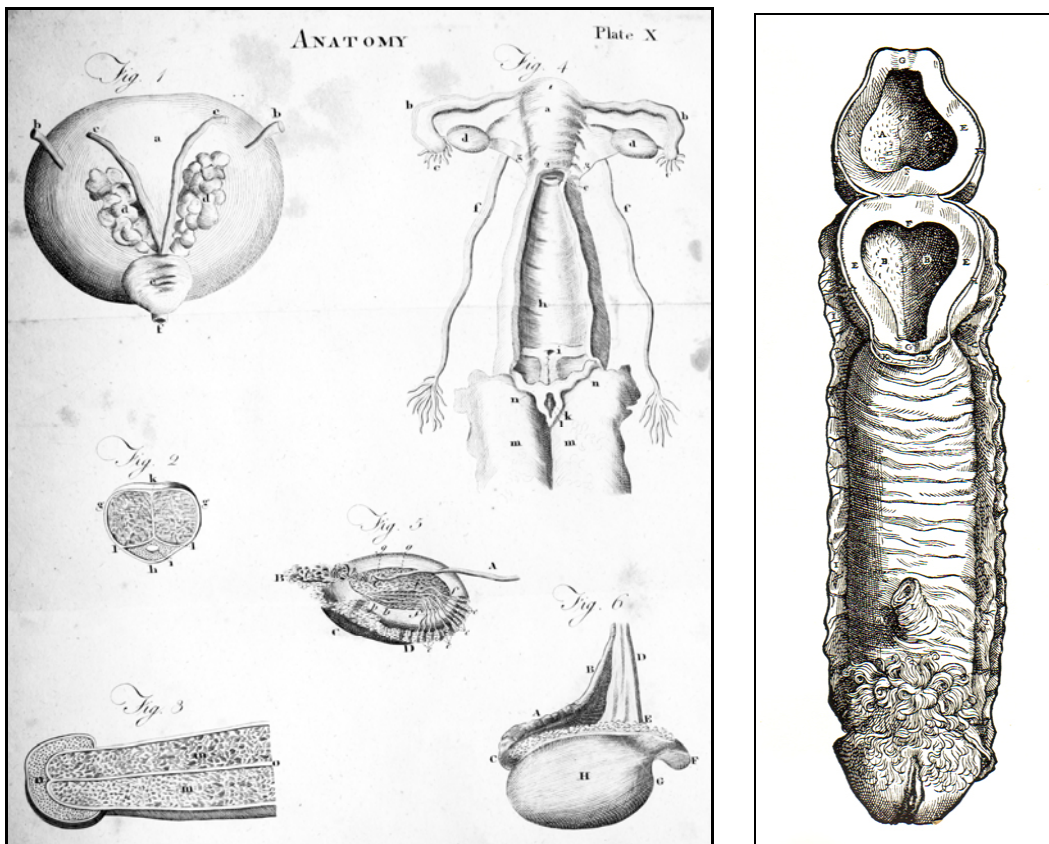


Figure 1 (left). Plate X from Caspar Wistar's "System on Anatomy for the Use of Students of Medicine" (1829, Courtesy, Library of the College of Physicians of Philadelphia). **Figure 2** (right). Plate 60 from Vesalius (in Saunders and O'Malley 1950, 171. Courtesy, Dover Publications, Inc.).

As William Shippen Jr. informed his anatomy class, "Health and disease are the opposite to each other, therefore unless the state of the body in health is known, we

cannot understand when it is diseased” (McWilliam 1777, student notes). The texts and drawings of Vesalius describe his beliefs that the differences in male and female anatomy were confined to external shape, and the organs of generation represent merely two ends of one analogy. The work of seventeenth-century anatomists such as Godfried Bidloo, who used classical sculptures and particular individuals as ideal models, carries on the analogous view. However, while the traditional method of illustration survived into the eighteenth century, a change instead occurred in depiction of the sexes into a contrasting image of functional differences pervading through the body at every level.

This new conceptualization filtered to American medical students directly through their professors and mentors in Edinburgh and London. Philadelphian student Caspar Wistar (1784) recorded in his notes of Dr. Monro’s lectures that

As women are more sedentary, and are evidently by nature prevented from being equally active with men, so we find that the texture of the body is everywhere more lax, has less strength, firmness and toughness in the several parts.

This statement, similar to many other contemporary American and European medical texts, indicates the female body as a whole is suited by nature for a different lifestyle than of the male body. Wistar’s own illustration (figure 1) of the sex organs, though similar in proportions to that of Vesalius’ plates (Plates 59, 60, in Saunders and O’Malley 1950), differs from Vesalius’ analogous depiction. Indeed, Wistar, like Vesalius, drew the uterus elongate and in close proportion to the penis. However, Wistar’s illustration can not be easily mistaken for a penis like Vesalius’ may. Vesalius made a point of showing the sex organs in a way that reiterates Galen’s (as cited in Schiebinger 1986, 74) earlier description:

Think of the man's [penis] turned in and extending inward between the rectum and the bladder. If this should happen, the scrotum would necessarily take the place of the uteri [sic], with the testes lying outside, next to it on either side; the penis of the male would become the neck of the cavity that had been formed.

Pennsylvania Hospital's own Dr. Benjamin Rush epitomizes the contrastive concept of sex differences. Rush believed that even the blood of men and women differ, and that because all disease arises from some imbalance in the blood and pulse, patients should be treated accordingly. "Sex influences the pulse in its quickness, that of females [is] more frequent than that of males" (Senac 1805, 29). Before further describing of the views of eighteenth-century Philadelphian physicians it is useful to first go into more detail about the medical society of Edinburgh and London. These European medical institutions were the models for the Pennsylvania Hospital, and that the first generation of Pennsylvania Hospital's physicians were educated and trained in Great Britain.

II

The transmission of anatomical and medical ideas can be chronicled from the Western European physicians identified above down to their American students through medical treatises, textbooks and student diaries and lecture notes. Alexander Monro primus² of Edinburgh offered one of the earliest descriptions of sex differences in 1726. He added to his text, *The Anatomy of the Humane Bones*, a functionalist explanation of the larger female pelvis:

² Alexander Monro primus (1698-1767), son of the military surgeon John Monro, was elected chair of anatomy at Edinburgh University in 1720. His position was succeeded by his son, Alexander Monro secundus.

The bones of women are frequently incomplete, and always of a make in parts of the body different from those of the robust male, which agree to the description already delivered, unless where the proper specialties of the female were particularly remarked, which could not be done in all places where they occur, without perplexing the order of this treatise: Therefore I chose rather to sum them up here by way of *Appendix*. (Monro primus 1726: appendix, 341).

Monro's choice of adding information on the female body as an appendix to an already completed text shows that the emerging emphasis on sex differences did not negate earlier anatomical knowledge, but rather presented already-accepted knowledge of male and female anatomy in a new way, by contrast instead of analogy. Transmission and emulation of this contrastive view towards sex differences can be traced like an ideological map using the successive works of Monro's students and their contemporaries as benchmarks. Jakob Ackermann, a German anatomist who studied under Monro, appended his text on sex differences arguing that traditional medicine did not take into account the different anatomy of women – differences which could influence the course of disease in the body and which must be treated accordingly (Schiebinger 1986, 70). William Hunter, in addition to teaching anatomy, surgery, physiology and pathology, began instructing students, including Pennsylvania Hospital's own William Shippen Jr., upon the specific diseases of women and children (Porter 2002, 121).

The teachings of William Hunter and his brother John greatly influenced William Shippen, Jr., who in turn left a profound impression upon Caspar Wistar (Morton 1897, 495). Shippen began teaching anatomy in Philadelphia in 1762, organizing his own lectures much like how his professors had presented theirs. A passage from the lecture notes of William McWilliam, one of Shippen's students, indicates the preservation of earlier anatomical knowledge as well as illustrates the contrastive medical body concept of the eighteenth century:

The male and female skeleton are said to be distinguished by the pelvis: In men, the bones are perhaps stronger and less delicate and have marks of muscles more plain. ...The cavity of which [the pelvis] is commonly larger in women than in men. The three points below are at a greater distance in females which is most remarkable in the sciatic notch. The breadth of the pelvis in men should be a third less than their shoulders. In women, a third more say the statuaries, but this is too great an allowance, though women's pelvis (sic) are certainly larger and thinner. A narrow pelvis is a great cause of a difficult labour" (1777, 124-125).

The statuaries referred to use an established system of proportions when designing sculptures of human forms (Schiebinger 1986). Again, the common historical lineage of Western art and science can be seen in Shippen's lecture. However, although his lecture reiterates anatomical differences between the structure, texture and strength of male and female bodies, Shippen did not appear to advocate, or even discuss, different medical treatment for men and women. In fact, the subjects used as examples in his course are not referred to as male or female, nor even as a patient or human. Instead, Shippen often refers only to pieces the body like mechanical parts:

The Abdomen has five pair of muscles, which are of infinite consequence to the machine, and have great influence in respiration, and on the viscera, and are connected in many principal diseases (McWilliam 1777).

Although this thesis aims to classify doctors into two categories – those who emphasized anatomical sex differences and those, largely before mid-eighteenth century, who did not, Shippen serves as a reminder that classification is no easy task. Instead, Shippen described sex differences of the body largely in structural terms and unlike his professor Hunter or his colleague Rush, did not speak of women's physiology as reacting to disease or treatment differently than men's. Besty Copping Corner sums up this situation well in her biography of Shippen:

John and William Hunter had left their stamp upon him. What he had learned during his student days would never leave him. Other American students of the period, most notable Morgan, Kuhn, and Rush, destined to become Shippen's close associates on the faculty of the first medical school in the colonies, were *exposed to similar influences and responded according to individual makeup* (1951, 1-2; emphasis added).

As a general trend, however, the literature produced by physicians of Pennsylvania Hospital since the 1770s increasingly emphasizes anatomical sex differences and advocates for special consideration of the diseases of women and children. Benjamin Rush believed all disease, including madness, arises from malfunctioning or injury to the arterial system. "The pulse be called a nosometer or compared to the dial plate of a watch or clock. It informs you of all that is going on in the body within"³ (Rush 1818, 27). Thus, not surprisingly, he advocated blood-letting perhaps more loudly than any other publishing American physician of his time. Rush illustrates the contrastive view in his "Medical Inquiries and Observations upon the Diseases of the Mind":

Sex influences the pulse in its quickness, that of females is more frequent than that of males....Semen, when retained, how does it produce disease? I answer it does not unless accompanied with a preternaturally strong venereal appetite whence it may produce plethora. Menses, when retained, produce a majority of female diseases whether of the chronic or acute kind. The suppression of the menses produces diseases of a highly inflammatory nature (Rush 1818: 29, 183).

³ Although Benjamin Rush laid the origins of disease completely within the blood, the idea of blood being absolutely central to life functioning has a much older history. John Hunter of Scotland, one of William Shippen Jr.'s mentors, proposed a "life principle" as the property (of the blood in animals and humans) that divides organisms from inanimate matter (Porter 2002, 70). This idea echoes Aristotle's sentiment that living matter possesses a spirit or essence (Hillar 1994).

Just as Rush finds the cause of diseases, especially madness, to result differently according to male and female physiology, so too he believes the best treatment should be fitted to the individual according to sex:

It has been remarked, that the maniacs of the male sex in all hospitals, who assist in cutting wood, make fires, and digging in a garden, and the females who are employed in washing, ironing, and scrubbing floors, often recover, while persons, whose rank exempts them from performing such services, languish away their lives within the walls of the hospital (Rush 1818, 226).

The treatment being advocated for, however, differs not in materials such as specific drugs, nor methods such as blood-letting. Instead, treatment differs between the sexes based on what physical and social activities are appropriate to the gender. The tie between anatomical knowledge and body concept is a close one. Gender ideology may restrict in some sense the kinds of treatment that will be accepted by the society of patients who give the hospital its purpose.

III

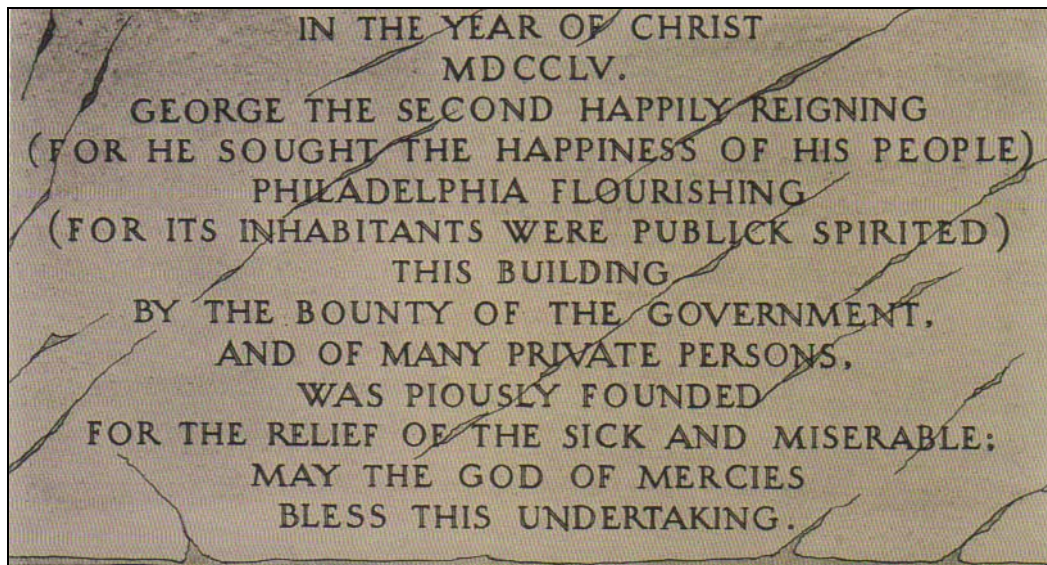


Figure 3. Original cornerstone of the Pennsylvania Hospital (Courtesy, Pennsylvania Hospital Historic Collections, Philadelphia).

The link we have to individual patients at the Pennsylvania Hospital during its first fifty years of operation is at best indirect. Whereas the thoughts of the physicians towards their work saturate treatises, lecture notes and personal correspondences kept in hospital archives, the thoughts of the patients towards their experiences within the hospital have largely perished un-inked. Fortunately though, not all is lost. While individual letters of admission and miscellaneous papers kept on file reveal qualitative information about individual patients, the patient ledgers in the Board of Managers' Minutes contain quantifiable information about hospitalization trends, diagnoses and success as well as mortality rates. All this information can be used to help reconstruct what eighteenth-century patients experienced within the brick walls. Multi-disciplinary research is invaluable to the endeavor of reconstructing patient experience. Economic studies provide methods for analyzing hospital bed utility (length of hospitalization per case) while socio-historical and anthropological studies in medical history provide theoretical frameworks (i.e., body concept). In particular, archaeologists have made the distinction between history and the lived past. The distinction draws a line in sand, forcing the researcher to decide how to proceed – either by studying “how the past *made the present*, or in how the past *is made* in the present” (Stahl 2004, 51). This study searches for a link between history and the lived past. Medical literature represents a product of history, while details from the patient records enable a reconstruction of the lived experiences of patients, albeit a limited reconstruction. An analysis of hospitalization trends, which are a tangible piece of the lived past, are compared to the historical image constructed for Pennsylvania Hospital and medical care in the eighteenth century. So dressed, the investigator is ready to proceed into America's first hospital.

Pennsylvania Hospital was founded in 1751 by Dr. Thomas Bond and Benjamin Franklin “for the reception and cure of poor sick persons” (Morton 1897, 6). The urban population had grown to 15,000 by 1751 and up to 40,000 by 1776 (Pennsylvania Hospital 2001). The port city teemed with sailors, dirty sewers, roads, proud architecture, markets, travelers, disease-ridden vectors, budding businesses and many immigrants. The idea for the hospital is credited to Thomas Bond, who had previously served as Port Inspector for Contagious Diseases. The hospital took in its first patients in 1752. By 1756 the permanent hospital, located on 8th Avenue and Pine Street, was ready to receive patients. Individual wards did not exist and patients were housed together, although perhaps loosely arranged ethnic or gender aggregations. The only completely separated group was “lunaticks” who originally occupied 15 cells in the basement. The administration created a west wing which was to house the increasing number of insane patients being admitted each year. At first mentally-ill patients outnumbered all other patients there. The minutes of the Board of Managers list patients as either “pay” or “poor,” with the latter outnumbering the former more than two-fold well into the 1780s (Morton 1897). Pay patients could afford to provide financial security for their boarding, food and medicines and, in the unfortunate case of death, for the fee of their removal from the hospital and into the cemetery. Poor patients were those whose security was paid for by institutions such as the Almshouse or House of Unemployment, or in some cases by individual philanthropists of the city. The socioeconomic boundary between many pay and poor patients is likely a thin one. A majority of the pay patients are from the working class, as affluent families were still largely in the practice of hiring private physicians to make house calls. The records do not indicate that poor patients were

housed in separate rooms or spaces from the pay patients. A resolution made by the Board of Managers in 1768 indicates the desire of the hospital to be able to care for pay and poor patients alike:

Resolved, That the pay patients now in the House and those who are hereafter admitted be accommodated with no other provisions for the diet than the other patients, and any extraordinary necessaries they require, such as tea, loaf sugar, coffee, chocolate wine or spirits, they provide at their own expense (Morton 1897, 211).

One right pay patients did have that poor patients did not was, “That those who are taken into the Hospital at a private Expense may employ any Physicians or Surgeons they desire” (Pennsylvania Hospital 1757, volume 1).

As with the provincial hospitals in England of the time, such as Norwich and Norfolk (Cherry 1972), the medical staff of Pennsylvania Hospital had the ultimate say in the admission and discharge of patients. Admission was selective and excluded people for being infectious, misrepresenting or lying about their health conditions or for not being able to present security for themselves to pay for their board. Such selective admission reveals that the hospital was not set up to care for the entire city population. Further, the goal of the hospital was to promote the highest possible recovery and discharge, accomplished in part by denying admission to individuals deemed “incurable” as well as to infectious individuals who could not be safely contained within the hospital’s walls.

A patient walking into the Hospital during the last half of the eighteenth century would enter through the main hall faced with marble staircases on both sides and a large glass chandelier overhead, leading through a doorway on one side to the less elaborate, but still large corridor of wooden furniture and brick walls. In order to be admitted, a

patient enters the medical fortress armed with a letter of request for admission signed by an influential member of society, public employee or older relative, stating that the bearer is indeed “a proper patient” or “object of charity suitable for the Hospital.” Poor patients must find some sort of financial security, often from the Overseers of the Poor or the Almshouse or House of Employment, which would promise to pay the Hospital for boarding, and relieve the Hospital of the expense of transporting the patient after discharge, or of interring the body in case of death. Pay patients have the same financial responsibilities to the Hospital, but because they did not require public security, are granted the right to request any physician on the Hospital’s board for examination or surgery (Pennsylvania Hospital 1757, volume 1). Poor patients are seen and treated by whichever physician was on duty.

Common reasons listed for needing hospitalization are diseases and injuries which incapacitated people from being able to work; such as the case of Jermiah McCafferty, admitted June 11, 1765 with a letter of security for illness that incapacitated him being able to labor; and on June 8, 1768, Jon Malcolm wrote a letter to Dr. Phineas Bond requesting admission of John Barefoot’s wife so the husband could resume work and earn a living (Pennsylvania Hospital 1764, volume 2, patient records). Hospitalization, however, was not a way to escape work and those who were deemed by the Hospital as being fit enough were put to work, most often as nursemaids. Nursemaids were held responsible for the cleaning of hospital beds, clothing, and housework as well as caring for bed-ridden patients and assisting in the administration of some medicines and food. A gender-specific division of labor was established among these patient-workers, base upon

the larger socio-economic division of labor of the American colonies, and reinforced by Dr. Rush's understanding of male and female physiology.

The above description serves for most patients, but a person admitted to the insane ward endured a different experience. For the first four years of operation, insane patients were kept in the cellar of the temporary hospital, which was damp and dark. The cells designed at the permanent hospital on Pine Street, to which patients were transferred in 1756, were ordered to be built with plank floors and plastered walls and inside shutters for windows. The Pine Street hospital cells were also damp and cold. Furnace heating was not introduced in the building's hallways until 1794. Morton (1897, 128) reported that many patients developed pulmonary illness and died while interred there. Often, however, pulmonary illness is not listed as the cause of death in the patient ledgers from these years. The records simply indicate, "Diagnosis: lunatick, Date Discharg'd (sic): died," with the date of death listed in the same column. However, the number of insane patients who died in the hospital is insignificantly more than the number of patients with other diagnoses who died. Isolation promoted calmness and, in addition to blood-letting and herbal treatments, enabled a quicker return of the pulse and behavior to normal, physicians believed. Rush invented a tranquilizer chair (Figure 4) upon which the patient was strapped by the head, torso, arms and ankles. Such a device offered numerous advantages over chains or straightjackets:

It [the tranquilizer] opposes the impetus of the blood toward the brain, it lessens muscular action everywhere, it reduces the force and frequency of the pulse, it favours the application of cold water and ice to the head, and warm water to the feet, both of which I shall say presently are excellent remedies in this disease; it enables the physician to feel the pulse and to bleed without any trouble, or altering the erect position of the patient's body; and lastly, it relieves him, by means of a close stool, half filled with water, over which he constantly sits, from the feoter (sic) and filth of his alvine evacuations (Rush 1818, 181).

A majority of patients admitted for insanity remained hospitalized for over a year, often for over a decade, while patients admitted for other ailments largely were discharged in under a year.



Figure 4. Benjamin Rush's tranquilizer chair. (Courtesy, Library of the College of Physicians of Philadelphia).

The diagnosis of the patients being admitted was established through a different set of standards than that of modern hospitals. Disease throughout the prime of the eighteenth century existed solely with the symptom. Diagnosis was established through interviewing the patient, and listening to the existence of the disease in the patient's own words (see Duden 1991; Fissell 1991). A modern reader may be confused or struck incredulous when reading in a ledger that on December 3, 1767 the Pennsylvania Hospital "Admitted Sarah Burns as a poor patient with a bad sore leg" or that on September 19, 1768 Isaac Hill, a sailor, was admitted for a "bad sore leg to be cured" (Board of Managers Minutes, Pennsylvania Hospital archives, patient ledger). "Soreness" in fact was a common

pathology before clinical medicine began in the nineteenth century to replace focus from patients' stories to their bodies in diagnosis. Physicians in eighteenth-century Philadelphia instead made diagnoses based on verbal or written description, often with no physical examination, as in the case of Catherine Dale, who on March 14, 1768 was admitted by Dr. Pemberton for palsy. Pemberton transformed the case history, as described in a letter by Dale's security, a Mr. George Gray, directly into an official diagnosis. (Pennsylvania Hospital 1764, volume 2). As Jonathan Andrews and Andrew Scull (2003, 107) point out, part of what made a skillful eighteenth-century physician was his ability to coax a history out of his patient and interpret which parts of the story reveal the nature of the illness in question. One case admitted December 4, 1765 reveals the conflict arising between the patient's story and the physician's interpretation. John Pemberton admitted a poor woman under his own security who reportedly wanted medicine for herself for an illness "which by her description seems to be a dropsical disorder. She did apply some 2 days ago and was put by...as I suppose she was consumptive, which she says is not her case" (Pennsylvania Hospital 1751-1860).

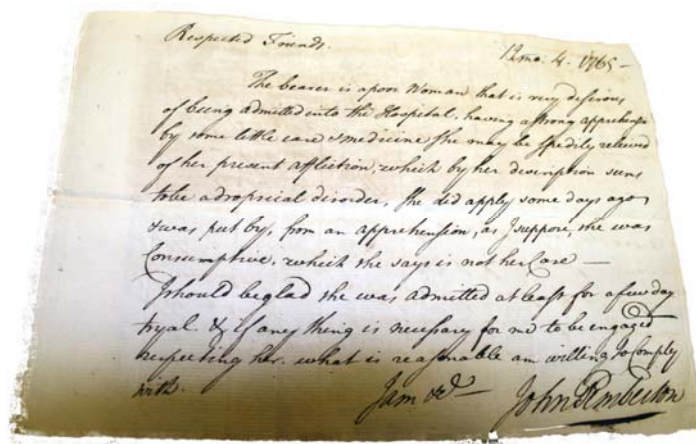


Figure 5. Letter of admission for a poor woman. Signed by John Pemberton (Courtesy, Pennsylvania Hospital Historic Collections, Philadelphia).

Although physicians admitted patients based largely upon verbal communication rather than physical examination, the hospital rules allowed doctors to turn away any patient found guilty of lying about their symptoms, or trying to hide any infectious disease such as Yellow Fever. Other patients were discharged for irregularity (misbehavior). A female patient was admitted November 26, 1759 for lunacy and was then “discharged for misbehavior” September 24, 1760 (Pennsylvania Hospital 1764, volume 2: 230). This last example reveals the difficulty of interpreting some eighteenth-century records. Although the patients faced strict rules for their admittance, board, payment and behavior, they still exerted their own influence upon the Hospital and its staff in a number of ways, which are visible even through the most limited records of the early years. The clearest example is in the patient ledgers where under the “discharged” column the words “left without doctor’s leave” or simply “escaped.” Hospital rules were obviously broken in some cases when patients’ ideas of treatment differed too much from that of the physicians and administration. Other small parts of the patient ledger can speak volumes about the quality of patient care, and the differences in care for women and men. Taking a cue from the subfield of medical economics (Harris 1975), analysis of the length of hospitalization is one measure of patient experience which can be used to chart changes in treatment over time.

METHODS



Figure 6. Benjamin Rush's portable medicine chest. (Courtesy, Pennsylvania Hospital Historic Collections, Philadelphia).

Having reconstructed the eighteenth-century medical body concept at the Pennsylvania Hospital, assessing trends in average hospitalization rates for women and men provides a measure of treatment in the lived past to compare to the historical image. The average length of hospitalization for men and women is calculated for each of eight categories for each year sampled to determine several factors: First, is there a significant difference in hospitalization time between men and women; if so, does the length of hospitalization increase or decrease over time; also, did either sex tend to remain hospitalized longer than the other for specific diseases? The population sampled from is defined as all in-patients hospitalized for any of the eight studied diagnoses (described below) for one year or less. Out-patients were not considered in this study because they

often failed to inform the hospital of their recovery status after leaving, or failed to complete the entire treatment regime. Similarly, in-patients who were discharged for irregularity or left the hospital without consent of their physicians are not considered when measuring the average length of hospitalization, because these patients did not complete a full course of treatment. Patients who died in the hospital also were not included. Disease diagnoses are broken up into categories designed to reflect the contemporary medical knowledge used in diagnosis and the kinds of treatment employed in curing such diagnoses: These are Venereal, Fever, Lunacy, Lesion, Trauma, Tumor, Soreness, and Inflammation and Infection.

Venereal: Cases counted as venereal listed in the annual account of residing patients in the Board of Manager Minutes included gonorrhea, “the venereal disease,” lues Venerea, sirrhous testicles, suppression of urine and “female obstruction” or obstruction of the menses. Many of the lues Venerea and possibly some diagnoses listed as gonorrhea are likely cases of primary and secondary venereal syphilis. Syphilis was not proven to be a separate disease from gonorrhea with a distinct etiology until the nineteenth century (Dracobly 2004). In fact, Pennsylvania Hospital’s John Monroe defended the “unity” theory of gonorrhea and syphilis in his lectures at the College of Physicians of Philadelphia:

First, I would observe an error which many entertain that the Gonnorhea [sic] and the pox [syphilis] are very different diseases and produced by matter of a very different kind. I would allege that the same disease affects differently different organs and as a proof I know certainly that a person having chancres [sic] can communicate Gonnorhea, or perhaps communicate both the chancres and the Gonnorhea (Wistar 1784).

Because sirrhous testicles, skin sores and blisters of the genitals were often treated in the same way as the cutaneous eruptions of syphilis and discharges of gonorrhea, these

were counted in the “venereal” category. Common treatment for all of these symptoms included mercurial rubs or pills. Shippen instructed his students that mercury may be used to promote secretions of the tissues (McWilliam 1777), and venereal disease could be carried out of the affected tissues by secretion, thus curing the patient by removing the disease. Secretion also was believed to promote release of obstructions of urine or menses. Caustics applied directly to the site of venereal sores or eruptions were believed to bring about a complete cure in many cases, as Monroe told his students, “I was always fully convinced that the disease was confined to the very spot of the pimple or ulcer” (Wistar 1784). Physicians at the Pennsylvania Hospital, particularly Monroe, also treated venereal cases and obstructions with herbs including bittersweet, a diuretic to promote secretions, and occasionally hemlock, a narcotic, for “painful uterine discharges, venereal ulcers...and to ease pain in open cancers” (Monroe 1824: 18, 47).

Fevers: Fever represents a gruesome but all too common danger for eighteenth-century Philadelphia. This category provides perhaps the largest logistical headache, as the eighteenth-century medicine of spaces and classes (Foucault 1973) was not as well-able to differentiate between causes of fever as the medicine of today. Whether a fever is part of the malarial cycle or brought on by malnutrition or bacterial infection, the treatment in both cases employs a battery of remedies including hot and cold applications, herbals, blood-letting, purging, liquors and sometimes opiates for pain or to calm (Senac 1805, Monroe 1824). Jean Senac agreed with Benjamin Rush that blood-letting reduces all kinds of fevers:

I have oftentimes seen double tertians converted into simple tertians by a single blood-letting. Half of the disease, therefore, may be removed by the loss of blood....Besides, after the blood-letting, the febrile heat is less distressing, the

sweats are less profuse, the pain in the head is milder, and all the functions of the body go on with more regularity (Senac 1805, 170).

Diagnoses counted under the category of “fever” include intermittent fever, slow fever, violent fever, fever with flux (diarrhea) and bloody flux (dysentery), fever and ague, ague (which could refer to either fever or chills such as in malaria), dropsical fever, fever and cough, and remitting fever.

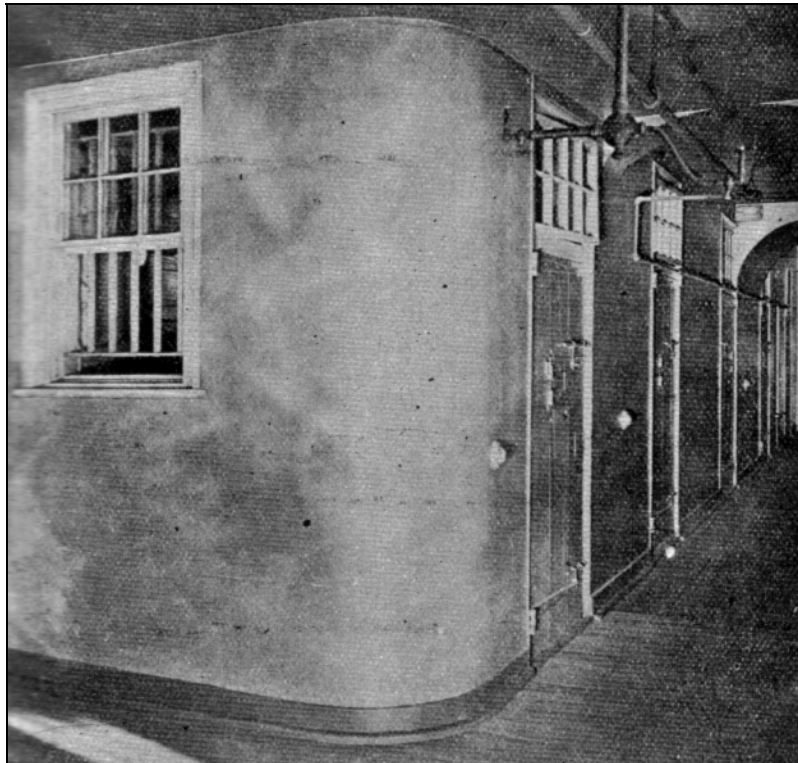


Figure 7. Cell in the basement of the Pine Street building for housing insane patients (Morton 1897, 129. Courtesy, Library of the College of Physicians of Philadelphia).

Lunacy: “Lunatics” (sic) hold a compelling position in the investigation of culture and medicine. Even today investigators can draw no clear line between the body and the person inside. Where does the brain end and the mind begin? Or are these one and the same (see Bock 1999)? Rush assigns irregularities in the blood, rather than the nervous system, as the ultimate cause. Also believing madness lays entirely within the

realm of physical science, he states the disease may be treated as any other disease affecting the body and its tissues.

Madness, it has been said, is the effect of a disease of the nerves. Of this, dissections afford us no proof; on the contrary, they generally exhibit the nerves after death from madness in a sound state. Madness has [by others] been placed exclusively in the mind. I object to this opinion...because the mind is incapable of any operations independently of impressions communicated to it through the medium of the body... [and] because there are no instances of primary affections of the mind, such as grief, love, anger, or despair, producing madness until they had induced some obvious changes in the body, such as wakefulness, a full or frequent pulse, costiveness, a dry skin and other symptoms of bodily indisposition (Rush 1818, 16).

From such a description, it is hardly a surprise that Benjamin Rush is known as the father of American psychiatry.

“Lunatics” are counted in this category along with cases of “confusion in the brain,” hysterics, people prone to fits, violent fits, “disorders of the brain” and those “quite out of his [or her] senses.” However acute cases of “convulsive fits” and cases of “epilepsy” are not included in analysis because there is no telling from the patient ledger whether such cases are housed with the lunatics, and thus living the same way in the hospital. Lunatics, as discussed in Chapter Two, were no strangers to blood-letting, and Rush believed copious blood loss could calm those prone to fits and hysterics. Aside from the spatial separation of insane from the rest of the patients, many of the treatments included the same materials, such as hot and cold applications, some liquors, opiates, herbs and purgatives. Additionally though, insane patients are counseled and subjected to lifestyle restraints in activities, as well as physical restraints by chains. Another form of restraint was Rush’s tranquilizing chair, discussed in Chapter Three.

Trauma: Division of labor and urbanization in societies correlate with increases in certain types of trauma, both violent and accidental (Larsen 1997; McCormick 1998).

Eighteenth- and early nineteenth-century Philadelphia paints no different a picture. The majority of the population belongs to the labor force, of which approximately 30 percent were female workers in 1772, increasing to almost 40 during the period of 1787 to 1795 (Salinger 1983, 68). However, in the years sampled for this study, on 7 of the 71 trauma cases at Pennsylvania Hospital are female. Under the category of trauma are all diagnoses that can be attributed to activity and not to pathology. These include fracture, breaks, bruises, contusions to the back and one contusion to the head, gun shot wounds, stabbing (including one man stabbed by a pitchfork), “pain from falling down,” burns, scalding and frost bite. This category did not include complaints of “soreness” which were placed in a separate category.

Tumor: Tumors and cases of cancer are included together in this category. The term “cancer” in the eighteenth century represents the specific body part affected rather than a physiological condition manifesting itself visibly in the body. By eighteenth-century medical standards, one has *a cancer in one’s breast*, but one does not *have cancer* – remove the part, and you remove the disease, for these were one and the same. While ulceration of the genitals is one symptom of primary and secondary syphilis, the cases of ulcer included in this category are those not recognized by the eighteenth-century physicians as venereal and those ulcers occurring on parts of the body not usually so affected by syphilis. Also, the records regard cases of genital ulcers as being venereal in nature, so the division is supported by the eighteenth-century conceptualization. Instead, this category includes largely ulcers of the lower leg and ulcers of the hands as well as “scorbutic ulcers.” As in other categories, the reason for including tumors and cancers here with ulcers lies in the similar medical treatment of each. Ulcers are lanced or

excised, tumors and cancers removed in surgery, and many cases of all these were treated with mercury. Opiates were sometimes administered to relieve pain and calm the patients (Wistar 1784).

Soreness: Now here is a funny-sounding diagnosis by the standard of today's medical lexicon fortress. This category represents all complaints of "soreness" which could not be confidently placed under the categories of trauma, lesion or inflammation. A majority of cases represent non-descript "soreness in the leg" or "very bad, sore leg" with fewer but still substantial numbers of non-descript sore thighs, knees, hands and sore eyes, and a few cases of "pain in the side," "bellyache," pain in the back or hips, and sore throat – all equally likely to have been caused by infection. We have no way of knowing which cases were pathological and which were not. Because medicine at this time lacked antiseptics or knowledge of microbial pathogens, infectious and noninfectious cases of soreness receive the same treatment. Perhaps the longer hospital stays of some of these cases represent cases complicated by infection, making them more serious.

Inflammation and infection: These are placed in a single category including diagnoses of swelling, white swelling, inflammation, gangrene, mortified body parts, rotted body parts, dropsy, "dropsical," and universal dropsy, but not frost bite (which was included under trauma). The medical armor against infection, sepsis and extreme physiological reactions such as glandular swelling and inflammation was scant in the eighteenth century, leaving doctors to rely on blood-letting, wraps and medicines such as opiates or herbals for pain relief.

Lesions: A lesion may be the result of trauma or a pathological eruption, and as such some of these cases may have equally well fitted under the category of trauma or

inflammation. For the sake of clarity, this category contains diagnoses of open cuts, nondescript contusions, “cutaneous disorders,” “cutaneous sores,” fistula (a kind of rupture) and “rupture.”

Tuberculosis, often diagnosed in eighteenth-century medicine as “consumption,” or “phthisis” is not considered in this study due to the low number of cases admitted to the hospital before the nineteenth century. Also, while the famous Yellow Fever epidemic of Philadelphia did occur within this study’s time frame, it was not considered because the hospital at this time was set up to refuse admission of infectious cases. The acute and deadly nature of Yellow Fever makes it less valuable to a study of gender differences in hospitalization as more chronic and endemic afflictions.

All cases admitted during one complete administrative year in each decade from the Pennsylvania Hospital’s opening in February 1752 to April 1801 are sampled: February 1752- April 1753; April 1761-1762; April 1770-1771; April 1780-1781; April 1790-1791; and April 1800-1801 (Pennsylvania Hospital Archives 1751-1860, 1757, 1764, 1775, 1784, 1804, volumes 1-7). Looking at all cases in a year gives each of the seasonal fevers and diseases an equal chance to be considered. Coincidentally, this sampling method is similar to that used by the United States Congress’s Office of Technology Assessment to compile data for hospitalization studies (Chassin 1983, 49). Once compiled, the data for both tables are organized to show the average length of hospitalization for men and women for each disease category of each year sampled. One-tailed student-t tests are run on samples of 30 or more individuals and nonparametric analysis (Mann-Whitney Test) is used when analyzing diagnostic categories with fewer than 30 individuals, to look for significance at a 90 percent confidence level. Analyses

are run on Statistical Package for the Social Sciences (SPSS) software. First, the average hospitalization of men and women in each diagnosis category is analyzed to determine if there is a significant difference between the sexes for any specific disease. Then, the cases are reorganized by year and analyzed to determine if a significant difference in hospitalization between men and women in general can be seen over time. If a significant difference is found in hospitalization rates, then this difference may be strongly influenced by the changing medical body concept.

RESULTS

In consideration of the length of hospitalization, only in-patients who were recorded as being “discharged cured” within one year or less from their admittance dates are counted, making for a sample of 404 male patients and 155 female patients. Table 1 shows the cases admitted in each year sampled in each diagnostic category. Although long-term, improperly-discharged and mortality cases are not considered in the analysis of different hospitalization lengths, these provide insight into the overall success of the hospital and warrant brief discussion here. The highest mortality rate occurs in cases of fevers and inflammation, owing much to the condition of public health and hygiene practices of the city. The physicians of the day realized the inadequacies of public health and attempted to circumvent the spread of infectious diseases, as when Thomas Bond ordered sick Irish passengers on an immigrant ship to be quarantined, subjected to steams of sulphur and vinegar and provided clean bedding and clothes (Bond, introductory lecture on clinical medicine, in Morton 1897, 465-466). Although the administration wanted to ensure the highest possible success of the hospital by denying access to the infectious and those deemed “incurable,” as long as those seeking admittance were not standing directly under Death’s doorway, they had a good chance for being admitted. Many patients resided in the hospital much longer than one year, particularly in the insane department.

However, it would be a mistake to deny the fact that many long term patients were eventually released “cured” and “much relieved,” adding to the saliency of the hospital’s image of success.

Table 1. Patient sample. N represents the sample size of patients “discharged cured” by the Pennsylvania Hospital. The denominator represents the total number of patients from which “n” is drawn.

Diagnosis	1752- 1753	1760- 1761	1770- 1771	1780- 1781	1790- 1791	1800- 1801	n
<i>Venereal</i>							
Men	0	6	36	6	9	20	70/79
Women	0	2	32	18	2	4	49/58
<i>Fever</i>							
Men	1	16	44	16	9	7	71/93
Women	2	2	13	2	0	1	16/20
<i>Lunacy</i>							
Men	3	15	39	35	33	56	60/181
Women	6	16	27	13	12	22	33/96
<i>Lesions</i>							
Men	0	3	5	0	1	1	9/10
Women	1	0	2	0	0	0	2/3
<i>Ulcer/cancer</i>							
Men	12	26	11	1	3	8	47/61
Women	4	9	8	2	2	0	17/25
<i>Soreness</i>							
Men	1	6	36	16	8	15	66/82
Women	0	2	11	7	1	2	18/23
<i>Trauma</i>							
Men	0	8	21	5	12	18	59/64
Women	1	1	3	1	1	0	7/7
<i>Inflammation</i>							
Men	4	2	13	2	4	10	23/35
Women	0	5	5	2	1	2	12/15
<i>Total men</i>	21	62	207	81	79	133	405/538
<i>Total women</i>	14	37	101	46	19	31	154/248
<i>Total</i>	35	99	308	127	98	164	559/831

The patient ledger also lists cases which were discharged for irregular behavior, taken away prematurely by family members, or escaped – all indications of a tension between the authority of the hospital and that of the patients over their own bodies.

Discussion now turns to the cases discharged as cured within a year, which are used to analyze the average length of stay of male and female patients.

For the diagnostic categories considered, many more men than women are admitted in each year sampled. Men outnumber women by approximately 4 to 3 in the Hospital's first year of operation. By 1761 male patients outnumber female patients by 5 to 2. The sexes are more equally represented after the Revolutionary War in 1780, but male patients again take the majority by 1790, at a ratio of almost 6 to 1. The Hospital's increasing bed supply and use in the last half of the eighteenth century appears to reflect the city's population growth pattern, which grew from approximately 14,300 in 1752 to 32,000 by 1775 (Smith 1977, 871). However, demographic reconstructions from before 1790 (the city's first Census) do not distinguish between the sexes. Historical reconstructions paint Philadelphia in the portrait of a booming colonial port city, in which women made up a substantial, although not equal, proportion of the labor force and poorest classes (Salinger 1983). Table 2 shows the total number of patients treated in five-year intervals from 1753 to 1802 and Figure 9 shows the ratio of poor to pay patients admitted in each year sampled from 1752 to 1801.

Table 2. Discharge statement of The Pennsylvania Hospital. Compiled from Morton 1897, 242.

Periods of five years	Total new cases treated	Discharged cured/relieved	Died	Remaining in hospital
1753-1757	339	236	41	24
1758-1762	712	488	75	52
1763-1767	1,604	1,206	181	103
1768-1772	2,039	1,488	241	105
1773-1777	2,136	1,547	314	68
1778-1782	678	441	108	26
1783-1787	779	461	90	57
1788-1792	906	373	74	63
1793-1797	1,054	749	151	70
1798-1802	669	672	143	97

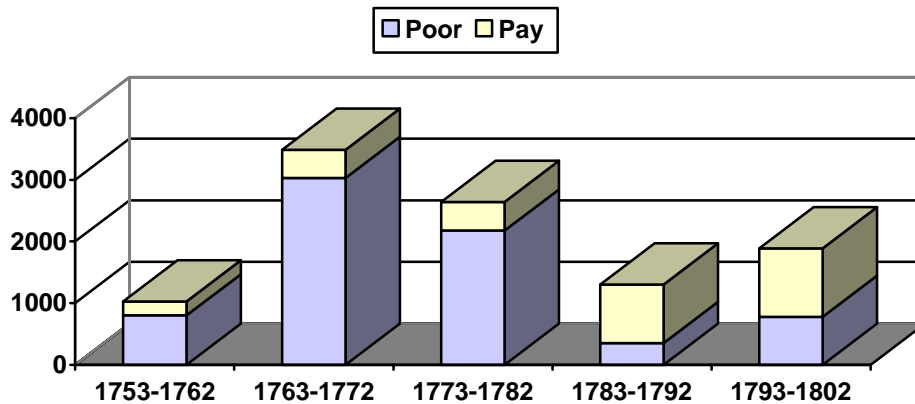


Figure 8. Ratio of poor to pay patients admitted in ten-year periods, 1753-1802. (Compiled from Morton 1897).

Billy G. Smith (1984) cites Philadelphia’s wealth in the eighteenth century as distributed among social age categories, in which the youngest adult groups are characterized by the most inequality of wealth. Approximately 80 percent of the urban population, as listed in the Philadelphia tax poll, did not own the properties in which they lived (Salinger and Wetherell 1985, 829). In colonial America in general, the growth of poverty “was chronic enough to embrace at least one-fifth of the heads of household by the eve of the Revolution” (Nash 1976, 574). Philadelphia too struggled under the weight of poverty, particularly among its youngest social classes.

The image cast of the Hospital’s demographic by Figure 9 correlates with the degree of poverty in the city at large, although Philadelphia has been seen as fairing better before the war than other Atlantic cities such as Boston. Women appear to make up for their lesser proportion of the patient population by typically staying longer in the hospital in all diagnostic categories except trauma cases. Table 3 details the lowest and highest individual hospitalization lengths and the average hospitalization for men and women in each diagnostic category.

Table 3. Average length of hospitalization for men and women by diagnostic category, 1752-1801. Significance assessed at the 90 percent confidence level.

Diagnosis	Male (n)	Hospital-ization (in days)	Female (n)	Hospital-ization (in days)	1-tailed student-t	Mann-Whitney Test
Venereal	70	\bar{x} 66.16	49	X 76.29	.367	--
		Low 1		Low 19		
		High 270		High 345		
Lunacy	60	\bar{x} 84.23	33	X 108.36	.186	--
		Low 4		Low 7		
		High 234		High 276		
Fever	71	\bar{x} 42.92	16	X 56.06	.374	--
		Low 2		Low 7		
		High 200		High 200		
Trauma	59	\bar{x} 88.78	7	X 83.43	.910	.393
		Low 5		Low 14		
		High 329		High 294		
Lesion	9	\bar{x} 5.94	2	X 6.25	--	.909
		Low 1		Low 28		
		High 119		High 39		
Sore	66	\bar{x} 100.98	18	X 129.06	.282	.135
		Low 14		Low 25		
		High 341		High 324		
Ulcer	47	\bar{x} 91.94	17	X 111.65	.467	.779
		Low 13		Low 26		
		High 318		High 329		
Inflammation	23	\bar{x} 85.26	12	X 100.50	.541	.344
		Low 10		Low 14		
		High 297		High 220		

However, the discrepancy in hospitalization time is not statistically significant. Men remained hospitalized an average of approximately 5 days longer than women for trauma cases, but this difference is also not statistically significant. The difference in hospitalization approaches significance for soreness cases (0.135 for the Mann-Whitney

test). A breakdown of these cases by year does show significant difference between male and female patients in 1780-1781 (0.087) and again in 1800-1801 (0.076) (Table 4).

Table 4. Average length of hospitalization (in days) for soreness cases.

Year	Male (N)	Mean	Female (N)	Mean	Mann-Whitney Test
1752-1753	--	--	--	--	--
1761-1762	6	3.67	1	6.0	.571
1770-1771	29	19.28	8	18.0	.786
1780-1781	13	8.46	6	13.33	.087
1790-1791	4	3.0	1	3.3	1.00
1800-1801	13	7.15	2	13.5	.076

Table 5. Average length of hospitalization (in days) for venereal cases.

Year	Male (N)	Mean	Female (N)	Mean	Mann-Whitney Test
1752-1753	--	--	--	--	--
1761-1762	6	3.5	2	7.5	.071
1770-1771	31	27.10	26	31.27	.344
1780-1781	5	6.3	17	13.03	.039
1790-1791	8	87.63	--	--	--
1800-1801	20	12.98	4	10.13	.477

The unavoidable ambiguity of the very diagnosis of “soreness” confounds interpretation. A significant difference exists for venereal cases in the year 1761-1762 (0.071) and 1780-1781 (0.039), but this may similarly be affected by small sample size (see Table 5). When all diagnostic categories are considered together, the men’s average length of stay lowers from 74.68 to 64.18 days while the women’s average increases from 82.88 to 96.25 days. This divergence correlates temporally with the increasing ratio of pay patients to poor patients experienced during the 1780s (Figure 10), however it is impossible to tell from the records whether the sexes are represented unevenly between “pay” and “poor” categories.

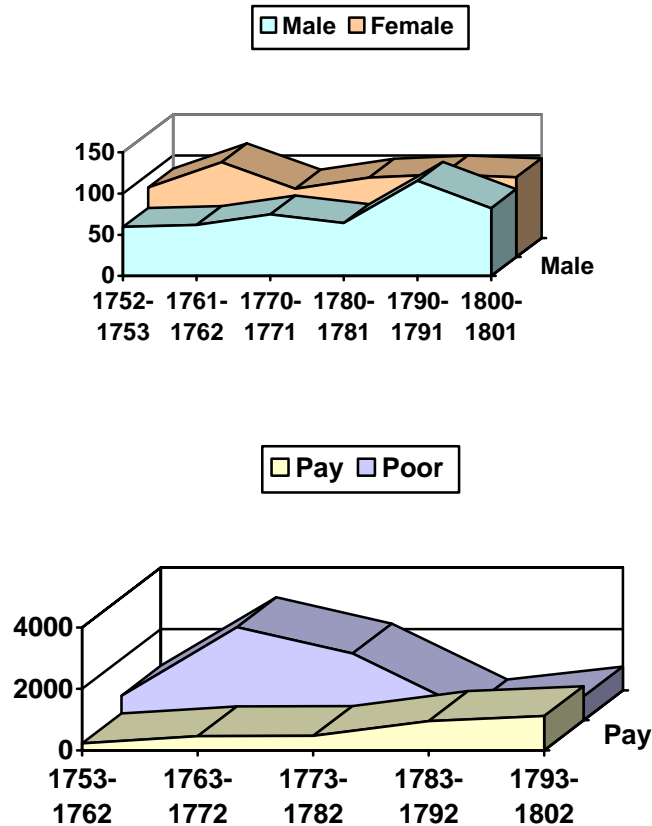


Figure 9. Ratio of number of days spent in hospital for men and women (top) and poor to pay patients (bottom) in five-year periods, 1753-1802. (From Morton 1897).

A significant difference exists in the 1761-1762 and 1780-1781 samples, in which women are hospitalized longer than men when all diagnoses are averaged together. Generally, no significant difference is found in the records of the length of hospitalization of in-patients during the time period analyzed. However, length of hospitalization for women is significantly longer at the 90 percent confidence level during two years sampled, 1761-1762 and 1780-1781, when looking at all cases in each year.

Table 6. Results per sample year (for all diagnostic categories).

Year	Male (N)	Hospitalization (in days)	Female (N)	Hospitalization (in days)	1-tailed student-t	Mann- Whitney Test
1752- 1753	16	\bar{x} 59.63 Low 20 High 135	11	X 84.18 Low 31 High 236	.222	.318
1761- 1762	60	\bar{x} 61.78 Low 1 High 311	24	X 114.92 Low 21 High 347	.014	.017
1770- 1771	145	\bar{x} 74.68 Low 1 High 341	66	X 82.88 Low 7 High 329	.450	--
1780- 1781	44	\bar{x} 64.18 Low 7 High 283	32	X 96.25 Low 11 High 345	.043	--
1790- 1791	44	\bar{x} 115.52 Low 4 High 337	7	X 100.14 Low 20 High 248	.659	.968
1800- 1801	96	\bar{x} 82.32 Low 5 High 335	14	X 96.71 Low 9 High 354	.641	.847

Nonparametric analysis reveals hospitalization is also significantly longer for women during the same two years for venereal cases, although those cases do not represent the majority of patients in either year. Women experienced much longer hospitalization for cases of lunacy and inflammation than they did under any other diagnosis, although the greater length is not significantly different than that of men (0.186 and 0.541, respectively).

DISCUSSION

I

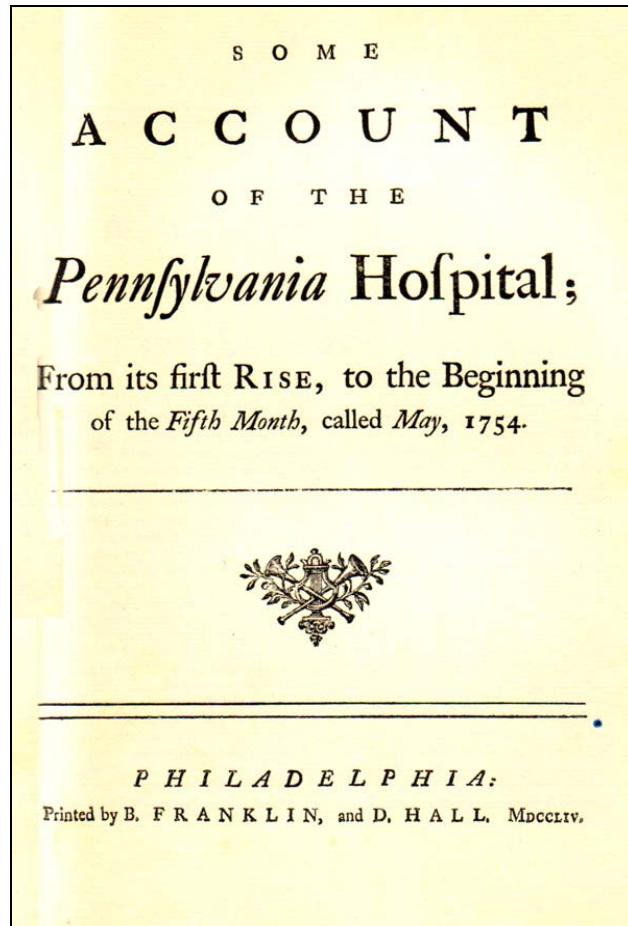


Figure 10. Benjamin Franklin's history of the Pennsylvania Hospital (1754. Courtesy, Pennsylvania Hospital Historic Collections, Philadelphia).

First and perhaps foremost, the results show that the lived past is not exactly or completely represented by the historical image. However, the results do not prove that the contrastive view towards sex differences has had no influence upon patient care. A noticeable difference does exist in which women typically remain hospitalized longer than men. Given the pervasiveness of this trend across diagnostic categories and the years

sampled, this indicates that physicians indeed believed it takes somewhat longer for women to recover well enough to be released from the hospital. The fact this difference never quite reaches significant levels may reflect the limitations of the physician's medical concept as an influence, especially if this view conflicts with socioeconomic pressures of medical billing and the views of the patients themselves regarding health and illness.

That in an investigation of treatment of the sexes there is no significant difference between male and female hospitalization for venereal cases may seem especially strange. Many historical studies find in casebooks and medical treatises major discrepancies in quality of treatment between women and men for syphilis in the nineteenth century. Jill Harsin (1989) found that in Paris, during the period of *reglementation*, physicians would often lie to their female patients who had syphilis and administer mercury pills without telling the women what they were diagnosed with, if that was the husband's choice. No evidence of this kind of practice exists in the records or casebooks at Philadelphia in the eighteenth century. About half as many women as men are admitted for venereal cases which reflects the smaller proportion of women in the contemporary urban population. In cases of husbands being admitted with their wives, the couple is often discharged on the same day, such as in the case of a citizen James and his wife Mary and child William are admitted March 20, 1770. As with fever, lesion, tumor, soreness and inflammation cases, the records indicate women and men admitted for venereal disease take about the same amount of time to be processed through the hospital and discharged cured. In all these cases, the contrastive body concept of the physicians appears to have influenced the slightly longer hospitalization of women in general, while other factors such as nutrition

and health status, medical billing, hospital bed supply and the patients' own conceptualization of illness and medical care appear to have kept this difference from becoming statistically significant.

II

The influence of the medical body concept upon hospitalization rates can be seen more clearly in the insane department, in which the limited autonomy of the patients incarcerated as lunatics correlates with an increase in the power of the physician, and thus reveals the influence of medical body concept more clearly. All years considered together, women spend an average of 108.36 days in the insane department, while men enjoy a shorter average at 84.23 days. So, why does it take an additional three weeks to bring women back to their senses? Benjamin Rush, the father of American psychiatry, offers much insight into the matter. While he is not the only physician treating the insane during the years sampled, he employs largely the same methods and materials for treatment as the rest of the staff. His writings reveal not only his vision of male and female bodies, but also allude to ways in which his medical body concept met resistance from the patient population.

Rush places the mind completely within the brain; the spread of disease in the body completely within the circulation of blood; and thus, places madness within the realm of all other biological pathologies, making it “depend upon the same kind of morbid and irregular actions that constitute other arterial diseases” (1818, 17). Additionally, Rush believes women by their biological nature to be more prone to irregularities of the pulse, body heat and faculties of the mind (which he calls the internal senses of the brain).

Women, in consequence of the greater predisposition imparted to their bodies by menstruation, pregnancy, and parturition, and to their minds, by living so much alone in their families, are more predisposed to madness than men. A woman was admitted into our Hospital many years ago, who was deranged only during the time of her menstruation, and who in one of those periods hung herself with the string of her petticoat. Of 1,664 [insane patients] admitted into the Bethlehem Hospital, between the years 1784 and 1794, 84 of them were women in whom madness followed parturition (Rush 1818, 59).

Although Rush believed women are more prone to madness, he knew that in fact, more men filled the cells of the insanity department at Pennsylvania Hospital. While surprised at this, he was at anything but a loss of words to explain it, writing:

More of the former (males) than of the latter (females) have been admitted into the Pennsylvania Hospital. In all these cases accidental circumstances, such as the want of accommodations suited to female delicacy, or deep-rooted prejudices against public madhouses, and a preference of such as are private, may have lessened the proportion of women in the above instances, while the evils of war, bankruptcy, and habits of drinking, which affect men more than women... may have produced more instances of madness in the former than in the latter sex. Perhaps it would be correct to say, *women are more subject to madness from natural causes, and men from such as are artificial* (1818, 60; emphasis added).

Rush's contrastive body concept remains intact, while instead he searches for justification of the conflicting reality the patient demographic presents against what he expects to see. His justification incorporates the contemporary view of nature versus culture, in which women are seen as being closer to nature and in a sense more primitive than their male counterparts who are responsible for developing culture and civilization. One reason we see a greater amount of difference in hospitalization between men and women for lunacy cases compared to other diagnostic categories may have to do with the more limited control insane patients had over their experience. Insane patients are kept isolated from the rest of the hospital, and because it is their very mental faculties that are diseased, the physician may be less likely to believe insane patients who say they feel

relieved or cured. The greater difference between men and women in lunacy cases then may reflect a situation where the medical body concept of the physician held stronger influence than for diseases affecting other parts of the body, leaving the mind (and thus the autonomy) of the patient more intact. Certainly, patients have relatively less control over their experience when their own words cannot be trusted *ipso facto*. Once again, Rush's wealth of writing provides insight into the treatment of patients. Blood-letting as a common treatment for a variety of diseases appears to have been even more easily, and often, subjected upon the insane.

Blood-letting is indicated by the extraordinary success which has attended its artificial use in the United States, and particularly in the Pennsylvania Hospital....In the use of bleeding in this state of madness, the following rules should be observed: It should be copious on the first attack of the disease. From 20 to 40 ounces of blood may be taken at once, unless fainting be induced before the quantity be drawn....The effects of this early and copious bleeding are wonderful in calming mad people. It often prevents the necessity of using any other remedy, and sometimes it cures in a few hours. It should be continued not only while any of those states of morbid action in the pulse remain which require bleeding in other diseases, but in the absence of them all, provided great wakefulness, redness in the eyes, a ferocious countenance, and noisy and refractory behavior continue, all of which indicate a highly morbid state of the brainThe quantity of blood drawn should be greater than in any other organic disease. This is indicated not only by most of the reasons for bleeding formerly given, but by the strong and uncommon hold which the disease takes of the brain (Rush 1818, 187-189).

Rush also prescribed cupping and blistering for madness, as well as hot and cold applications, which are also prescribed by most physicians for fevers; purging which is prescribed for infections and obstructions; and herbals and mercury, which are prescribed, especially by John Monroe, for many other illnesses (Rush 1818; Monroe 1824).



Figure 11. Dr. Benjamin Rush. Portrait by Thomas Sully. (Courtesy, Pennsylvania Hospital Historic Collections, Philadelphia).

Treatment unique within the insane department includes solitude, denial of conversation and visitors, darkness to invite silence and reduce the pulse, and erect posture – which is noted also as a method of taming refractory horses in England (Rush, 1818, 190).

Although patients in the insane department have considerably less control over the course of their treatments than other patients, they certainly are not powerless. A strong resistance to the authority of the physician, as well as medical concepts of the body and health, present themselves in several of Rush's cases.

A Mrs. D – , whom I supposed, for several months, had recovered from madness, under my care, said to me one day, in passing by her in our hospital, upon my asking her how she was, ‘that she was perfectly well, and that she was sure this was the case, for that she had at last ceased to hate me’ (Rush 1818, 225).

[Another case] occurred in a Miss H. L., who was confined in our hospital in the year 1800. For several weeks she discovered every mark of a sound mind except one. She hated her father. On a certain day she acknowledged, with pleasure, a return of her filial attachment and affection for him; soon after she was discharged cured (Rush 1818, 255).

Inadvertently, Rush’s casebook provides not only his view of the two patients described above, but he also provides insight into how these women understood their conditions, as well as how to behave in order to be accepted as “cured.” Andrews and Scull (2003) similarly have found insight into patient views through the casebook of the eighteenth-century English physician John Monro. In both Monro’s and Rush’s records, the voices of their patients can be heard loud and clear through quotations, but also more subtly through the physician’s descriptions and reactions. Whether or not Mrs. D and Miss H. L. actually felt what they reported to Rush is not discernable from the record, but both appear to have said exactly what they needed to in order to be seen as cured by their physician. A third case provides further insight:

We see further from this case [of the woman who thought the spirit of General Washington was visiting her at nights] that the cure of mental and bodily diseases is to be effected by the same means. [Eventually cured, she never mentioned Washington again] nor discovered any other mark of the remains of her disease. From the history of this case, we see there are the same acquiescing, diverting, and opposing points in this grade of madness that were mentioned in the treating upon the cure of tristimania, and amenomania, all of which should be carefully attended to in conversing with persons who are affected with it (Rush 1818, 209).

Throughout the course of the woman's treatment, Rush bled her and said he paid no heed to her ravings. After the pulse had been reduced following each bleeding, he would speak with her and always changed the subject whenever she started to talk about General Washington. Eventually, she stopped bringing the man up all together, and was discharged cured.

III

In addition to lunacy, women stay hospitalized longer in all the other diagnostic categories, although to a lesser extent – except for trauma cases. The pervasiveness of this trend across illnesses indicates the contrastive concept toward anatomical sex differences is an influential factor upon hospitalization. Simultaneously, the lesser degree of difference seen outside the insane department indicates the medical body concept has slightly less power in relation to other factors, especially the autonomy of the patients themselves. Why does the opposite situation exist for trauma cases? One possibility stands that this results from exposure to different hazards due to the sexual division of labor. However, a majority of Pennsylvania Hospital's patients represent the working class and poor, and as Salinger (1983) observed, women make up to 30 percent of the work force in Philadelphia by the late 1700s. The patient ledger shows that, indeed, women are admitted for broken legs, arms and jaws, contusions, head wounds and even scalded feet. Women get hurt in the same ways, and same places, that men do. No cases from the sample exist who remained in the hospital for longer than one year. Of the 71 cases admitted (64 men and 7 women), only three men died at the hospital. The substantial cure rate among trauma cases seems to be one of only quantifiable success,

however, as the reality of being “cured” may not be as much a relief as the term implies. For example, an African slave owned by William Henderson, admitted December 22, 1760 for frost bite on his feet, was discharged February 11, 1761, “Cured, after amputation of both his legs” (Pennsylvania Hospital 1751-1860). Another consideration to bear is that while men stayed hospitalized longer on average for trauma, they also experienced a greater range in hospitalization lengths, from 5 to 329 days. The lack of long term trauma cases perhaps indicates the desire of most injured people to return to work as quickly as possible and to minimize the amount owed to the hospital. The greater range in hospitalization among men is likely a result of the small sample size of women, at only seven cases.

Different interpretations present themselves in this study. Perhaps the emphasis placed upon sex differences in anatomy halls and reiterated in medical literature throughout Western Europe did not influence American medical students to the degree that it appears to have influenced native students at England and Edinburgh. This interpretation is not valid at present because no studies have been done on European hospitals of the same period to test for differences in hospitalization of the sexes. The more likely possibility is that, as the hospital experiences of patients are products of many influences in addition to the physician’s views and actions, length of hospitalization represents a product of many more variables than can be assessed from literature available on Pennsylvania Hospital during the time period studied. Put another way, lived medical experience may not reflect the image presented by contemporary medical literature. This thesis opens questions for future research in the task of studying patient experience and the behaviors of doctors as influenced by medical body concepts.

Future research at Pennsylvania Hospital may need to extend into the nineteenth century when hospital records begin to include more complete and detailed information about individual cases. Similar studies at other contemporary hospitals in America and Western Europe may also shed light on the link between the medical body concept demonstrated in literature and patient experience in life.

CONCLUSION

“Experience is the mother of truth, and by experience we learn wisdom”
- William Shippen, Jr. in his commencement speech at Edinburgh, 1761
(In Corner 1951, 148).

In Chapters One through Three, historical documents and contemporary texts are used to reconstruct the body concept of eighteenth-century medicine in Western Europe and Philadelphia, Pennsylvania, which began by mid-century to place an immense emphasis upon physiological sex differences, and explicitly advocate in some sources for male and female patients to be treated differently. The results of hospitalization analysis provide a sample of the lived past to hold in comparison with the historical image. The results stand testament that the views of history reflect a sometimes refracted view of the lived past, especially of those individuals who are not authors. Many social, cultural, biological, educational and economical factors come to play in the medical encounters between physicians and patients. The medical body concept is just one aspect of such factors, but likely flexes a strong influence, as demonstrated in the management of the insane at Pennsylvania Hospital. Changes in body concept throughout medical history, part of what historian Barbara Duden (1991) has called the sociogenesis of the body, have been studied in great detail (Foucault 1973, Schiebinger 1986, Gilman 1995, King 1998). Further investigation into the power of medical body concept upon the patient experience needs to be done in a way that explores not only the history of the past, but how that history is made in the present (Stahl 2004), while also looking for pieces of the lived past that have been ignored by history. In some cases, in the hospital records, evidence of patient resistance to the doctors as well as to the medical body concept was

apparent. Reconstructing changes in the body concepts of these patients and further investigating this essential other half of the doctor-patient encounter at Pennsylvania Hospital is a valuable and needed addition to the information here, but time and scope have not left room for deeper investigation, yet. There is more work to be done on this topic, and this thesis opens the door for further investigation.

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VITA

How does one sum up one's life in a meaningful way?

Let's try a list:

- 18 moves
 - 8 car crashes
 - 1 surgery
 - 3 head injuries
 - a few second-degree burns
 - visited 45 out of 50 states
 - 5 dead pets
 - a few dead friends
 - 9 schools
 - 5 tattoos
 - 15 piercings
 - 2 cases of pneumonia
 - 2 years of substance abuse off and on
 - waiting tables
 - slinging coffee
 - 4 journalism jobs
 - 1 bartending stint
 - 1 job in a morgue
 - a bachelor's degree
 - 1 broken heart
 - a few broken bones
 - + attending the live births of her two nephews and one niece
- Sally Carraher, anthropologist

Conclusions:

The human body is a funny, funny thing; you only get one life; anthropology teases anthropologists with promises of learning the secrets of the universe and the meaning of life; you only get one body; enjoy it; study it; help others; live as if you are going to die tomorrow; learn as if you are going to live forever.