

Southern New Hampshire University

Dead and Buried... For Now

The Misdiagnosis of Death in Enlightenment England

A Capstone Project Submitted to the College of Online and Continuing Education in Partial
Fulfillment of the Master of Arts in History

By

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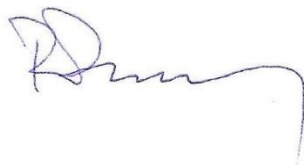
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Abstract

While the concept of the misdiagnosis of death resulting in premature burial sounds like a theme from Hollywood, it was a real circumstance that took place in Western Europe from antiquity through the nineteenth century. Specifically focusing on the England in the eighteenth and early nineteenth centuries, stories of people who had been prematurely diagnosed as dead, prematurely set into their coffin for viewing, and prematurely committed to the grave have been well documented within medical texts, academic books, art, and newspapers articles from the time. These sorts of publications showcased societies awareness of people were being misdiagnosed as dead committed to the earth alive. In response, scholarly physicians began to identify the stages of death with the intent of properly diagnosing people, and only committing those who were absolutely dead to their final resting places.

This research is unique to the field in several ways. First, it presents an awareness of premature burial by academic physicians and draws the connection between the problem and the response of the medical community to identify the transitional stages of – and define – death. It focuses on the societal awareness of the misdiagnosis of death, how awareness was obtained, and what was done to help rectify the issue in both the academic medical community and by the public at large. Finally, this thesis presents the first modern statistic comparing the prevalence of premature burial as reported in England. One hundred and fifty-five (155) cases of apparent death and the subsequent premature repercussions (enclosure, burial, interment, or dissection) that had occurred in western Europe and America during the eighteenth century were analyzed in order to create this statistic. These cases were reported in primary and early secondary sources in England. This statistic was then compared against the two hypotheses published in England in

the late eighteenth and early nineteenth centuries. Specifically, this modern statistic was contrasted against the hypothesized 10% – 50% of people being buried prematurely in western Europe, as reported by Dr. Samuel Glasse in 1789, and the 10% of people being prematurely buried in England, as reported by Dr. John Snart in 1817.

Dedication

To Peter, Kelly, Gerri, and Barb: thank you for bringing such humor and love to this entire process. And, to Dr. David Zuck, I will always treasure our long conversations about the history of medicine. Rest in peace.

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The journey which has brought me here was anything but linear. Starting as a scholar of medicine during the British Enlightenment gave me a strong foundation to travel down the rabbit hole, as it were, when I finally understood that the “premature burial” about which I was reading was more than just a wayward concern. Over the past decade, I have encountered many people who have supported my vision and myself, and who have helped guide me along this path. There have been friends who have listened to me go on for hours about theories that I was certain about, only to hear me change my mind as more information was discovered and processed.

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List of Abbreviations

LAPPB – London Association for the Prevention of Premature Burial

MOLA – Museum of London Archeology

RCP – Royal College of Physicians

RCS – Royal College of Surgeons

Glossary

Body-Snatcher – A person who murdered people in order to supply the freshest bodies to medical professionals and school administrators for anatomical study and dissection.

Burking – The action of killing a person to sell their freshly dead corpse to medical professionals for use in their anatomical dissections.

Entombment – When a corpse is interred in a tomb rather than buried in a grave. Also called interment.

Grave robber – A person who exhumes a grave or opens a tomb for the purpose of stealing the things inside the tomb, but does not touch the body.

Medical professionals - Anatomists, physicians, surgeons, professors/students of medicine, etc.

Premature repercussions – the actions that happened after people were prematurely diagnosed as dead, such as prematurely enclosed in their coffin, premature burial/interment, and premature dissection.

Resurrectionist – A person who exhumed recently buried corpses to sell to medical professionals and school administrators for anatomical study and dissection.

Introduction

*“in doubtful cases of actual death”*¹

While the concept of people being incorrectly diagnosed as dead and, therefore, being buried while still alive sounds like cliché premises of the horror genre, they were real, interrelated issues that plagued England (and western Europe at large) from antiquity through the late nineteenth century. Ancient medical scholars, such as Pliny the Elder (1st century AD), recorded two cases of people who “return’d to Life when they were about to be laid in the Grave,” both of whom died in the process of disposing of the body.² The ancient scholar Quintilian also recorded stories of people who had revived “after they were about to be laid in the Grave as dead.”³ The advancement of literacy and the printing press increased public awareness of the issue throughout history. But, the most revealing story about concerns relating to the misdiagnosis of death relates to the end of the career of Andreas Vesalius.

Andreas Vesalius (1514-1564) was an anatomist during the sixteenth century whose research advanced what western Europeans understood about the human body. His book *De Humani Corporis Fabrica* (1543) ushered in a new era of study regarding human anatomy and included detailed information on bones, cartilage, muscles, ligaments, veins, arteries, and organs. Despite his prolific work and contributions to the study of human anatomy, it’s the end of his career which draws a direct correlation to this thesis.

¹ Christian Henry Eisenbrandt, “Life-Preserving Coffin; In Doubtful Cases of Actual Death,” A61G17/02 Coffin closures; Packings therefor, 1843, accessed November 18, 2018, <https://patents.google.com/patent/US3335A/en>.

² Jean-Benigne Winslow, *The Uncertainty of the Signs of Death and the Danger of Precipitate Interments and Dissections* (London: The Globe, 1746), 38.

³ Winslow, *The Uncertainty of the Signs of Death*, 27-28.

During the early 1560s, Vesalius went on a pilgrimage to Jerusalem, leaving his career for reasons unknown. However, the U.S. National Library of Medicine is in possession of a sixteenth century copy of a letter, which explained that Vesalius “had been hired to treat a Spanish nobleman who subsequently died.”⁴ The letter explained that Vesalius had obtained familial permission to perform an autopsy on the body, but upon opening the chest cavity it was discovered that their heart was still beating, and patient died. The family called on the Spanish Inquisition to press charges against Vesalius for murder. Before the charges could be placed, however, King Philip II intervened and ordered Vesalius to go on a pilgrimage as penance for what had transpired.⁵ Although this story had been repeated throughout history by medical professionals such as Drs. Ambrose Pare (1579), Jean-Benigne Winslow (1746), and James Curry (1792), it is modernly accepted as a myth. Whether the story was true or not makes little difference in this case. The important aspect is that the story of a body being dissected prior to the person actually being dead was recorded during the Renaissance and repeated throughout the eighteenth century. This proved that the concept of being misdiagnosed as dead, being dissected while alive, and dying due to this error was believable.

Later, other scholars wrote on the topic of the premature diagnosis of death and people coming back to life during the burial process. During the early eighteenth century, the Italian physician and anatomist Giovanna Lancisi recorded an instance where he witnessed a person, who had been misdiagnosed as dead, return to life at a funeral while the priest presided over the corpse.⁶ Despite the reoccurrence of stories about people being buried alive due to being

⁴ Michael J. North, “The Death of Andreas Vesalius,” *Circulating Now* (2014), accessed October 2, 2018, <https://circulatingnow.nlm.nih.gov/2014/10/15/the-death-of-andreas-vesalius>.

⁵ North, “The Death of Andreas Vesalius.”

⁶ Winslow, *The Uncertainty of the Signs of Death*, 4. Reported from Lancisi’s book *Treatise de Morte Subit*; Lib. I, Cap. xv, N. 2.

improperly diagnosed as dead, the medical turning point occurred during the mid-eighteenth century with the publication of Jean-Benigne Winslow's book *The Uncertainty of the Signs of Death and the Danger of Precipitate Interments and Dissections*. Originally written in French in 1740, translated and expanded by Jean Bruhier (1742) and expanded again by M. Cooper (1746), this book included a comprehensive history relating to the misdiagnosis of death and the resulting premature burials and interments. It presented over 100 stories of people who had been misdiagnosed as dead, from antiquity to the eighteenth century, and the results of the misdiagnosis. Complementing the history and stories were several illustrative plates depicting people raising out of their grave, sometimes surprising resurrectionists as they opened the coffin. Finally, Winslow listed tests that could be performed on those exhibiting signs of apparent death, in an effort to make certain that people weren't accidentally burying their friends and family alive. Concurrently, John Fothergill's book *Observations on a Case Published in the Last Volume of the Medical Essays, & of Recovering a Man Dead in Appearance, by Distending the Lungs with Air* was published in 1745. In this book, J. Fothergill reprinted and supported William Tossack's resuscitative procedure which revived an apparently dead person. During this time, society became increasingly aware of people being prematurely buried as a consequence of being misdiagnosed as dead. As a result, the medical community to begin to develop a more comprehensive definition of death during the British Enlightenment.

In order to understand the medical basis that the scholarly medical community of London was relying on in order to devise a more comprehensive definition of death, it is important to have a basic understanding of medical theory to the eighteenth century:

The journey to early modern medicine started in ancient Greece where medicine was described by the school of Hippocrates as a healing art, where “an art” was defined as a skill that took a lot of practice to perfect. Although the theory is typically credited to the Roman physician Galen, Hippocrates developed the origins of the humoral theory by explaining how the concepts of hot, cold, moist, and dry could be applied to the treatment of the sick.⁷ During the second century, AD, Galen expanded on Hippocrates humoral theory and others continued to advance the theory during the 9th and 11th centuries. The culmination of this research led to the foundation of western medicine, with an understanding that the four humors were black bile, yellow bile, phlegm and blood. These humors were associated with the initial concepts that Hippocrates had put forth, and the theory evolved to mean that a healthy body was one that had these four humors in balance, and if the humors fell out of balance, they could be readjusted with diet and exercise.⁸

During the sixteenth century, the well-educated physician, Philippus Aureolus Theophrastus Bombastus von Hohenheim, commonly known as Paracelsus, sought to change the way that the medical theory was studied and taught by the university system. In general, “most intellectuals and scholars became enchanted with antiquity, with old manuscripts, with ancient Greek, Egyptian, and Latin writers, philosophers, physicians and scientists,” and sought answers to medical questions within those writings.⁹ However, Paracelsus found the education that he obtained through the European university system lacked in terms of experience. After receiving his doctorate from the University of Ferrara in 1516, he spent the next eleven years traveling

⁷ Noga Arikha, *Passions and Tempers: A History of the Humours* (New York: HarperCollins Publishers, 2007), xviii.

⁸ “The Balance of Passions,” National Library of Medicine, last modified November 3, 2011, <https://www.nlm.nih.gov/exhibition/emotions/balance.html>.

⁹ Joseph F. Borzelleca, “Paracelsus: Herald of Modern Toxicology,” *Toxicological Sciences* 53, no. 1 (2000): 2.

throughout Europe, Egypt, and the Middle East in order to learn all he could about contemporary medicine. When he returned to Europe, he attempted to bring the information he learned back into the university system. Unfortunately, Paracelsus' vivacious personality, profound disrespect for the ancient physicians and their theories, and new ideas were not readily accepted or respected by the academic scholars of the university system.

One of Paracelsus' theories that challenged the way that the scholarly medical community thought was his theory on disease. Paracelsus publicly denounced the humors and put forth a precursor to the modern germ theory, which he called the Seeds of Disease. In contrast to the modern perception that disease is something that happens to the body, Paracelsus believed that disease was something that happened in the body.¹⁰ Although Paracelsus' theories were not readily accepted until after his death, this shift in thinking marked a turning point in the history of medicine, where it started to be considered a science, rather than an art.

Although his views were unpopular, Paracelsus was not the only medical professional in sixteenth century Europe who began to doubt the ancient medical texts. Andreas Vesalius was a Professor of Surgery and Anatomy at the University of Padua when he wrote his *De Humani Corporis Fabrica*. His book included such detailed drawings of the human skeleton and musculature that it changed the way anatomy was studied and understood. This was because his research on human anatomy was obtained by doing dissections on corpses that he or his students had stolen from their tombs.¹¹ Vesalius' findings challenged what the scholarly medical community knew about the inner workings of the human body because he dissected human

¹⁰ Walter Pagel, *Paracelsus: An Introduction to Philosophical Medicine in the Era of the Renaissance* (New York: Karger, 1982), 342.

¹¹ Katharine Park, "The Criminal and the Sainly Body: Autopsy and Dissection in Renaissance Italy," *Renaissance Quarterly* 47, no. 1 (1994): 18.

bodies in order to gain knowledge about human anatomy. The dissection of the human body was a relatively new concept and had not been performed prior until the fourteenth century. Prior to that, the scholarly medical community's reliance on the writings of Galen had sufficed for knowledge on human anatomy. However, since Galen's writings were based off of the anatomy of pigs and apes, Vesalius was able to disprove several Galenic theories on human anatomy and physiology.¹²

As steps were being taken to expand theories regarding the transmission of infectious disease and the inner workings of the human body, William Harvey was pondering the question of life – literally. His experiments with blood circulation disproved the Galenic theory that “blood in the left ventricle came directly from the right ventricle through pore in the interventricular septum and some through “leaks” in the pulmonary circulation.”¹³ In 1628, William Harvey proved that the heart pumped blood, causing it to circulate around the body. With the acceptance of this new theory, the medical community accepted the theory that the circulation of blood equated life. Therefore, the lack of circulation became a sign of death.

Part of this medical narrative was held by the resurrectionists, who exhumed and sold recently buried bodies to medical schools for profit. Historians, such as Ruth Richardson and Caroline McCracken-Flesher have favored the word ‘body-snatcher’ over the use of the word ‘resurrectionist,’ and sometimes used the words interchangeably. However, there appears to be a subtle difference between the two. In his book *The Diary of a Resurrectionist (1811-1812)*, James Blake Bailey explained that the Burke and Hare murders “drew special attention to body-

¹² Domenico Laurenza, “Art and Anatomy in Renaissance Italy: Images from a Scientific Revolution,” *Metropolitan Museum of Art Bulletin* 69, no. 3 (2012): 28.

¹³ Stanley G. Schultz, “William Harvey and the Circulation of the Blood: The Birth of a Scientific Revolution and Modern Physiology,” *News in Physiological Sciences* 17, no. 5 (2002): 176, accessed October 13, 2018, <https://doi.org/10.1152/nips.01391.2002>.

snatching in Edinburgh, as consequently there have been published ample accounts of resurrection-men in Scotland.”¹⁴ This clearly delineated the two terms as separate entities. In addition, John Craig’s *A New Universal Etymology and Pronouncing Dictionary* defined a resurrectionist as “one who exhumes dead bodies by stealth, for the purpose of dissection.”¹⁵ This definition aligned with a story from the *Sussex Advertiser*, which was published on January 29, 1749:

On Thursday last the Churchwardens of the Parish of St. Giles’s in the Fields indicted one Thomas Hayes at Hicks’s Hall, for taking dead Bodies out of the several Church-Yards in and about Town, and selling them to Surgeons. The Court sentenced him to be confined six Months in Newgate, and to pay a certain Fine. The Court declared their great Dislike to such unnatural Behaviour, and will punish it more severely for the future.¹⁶

Finally, in 1868, Bransby Blake Cooper, the author of *The Life of Sir Astley Cooper*, blended living and social history to provide context regarding resurrectionism as an accepted profession which was necessary for the continuation of medical study. In his biography of Sir Astley, Cooper provided a generally normalized perspective on the profession of resurrectionism, going so far as to describe them as “essential to him, as to all other teachers of Anatomy and Surgery,” and stating that they enabled “them to perform the duties which they had undertaken.”¹⁷ As scholarship on resurrectionists shifted from personal and social memory, however, the general author biases shifted from one of acceptance to one of disgust.

Modern scholarship on the study of death during the eighteenth and early nineteenth centuries has typically focused on three areas: the evolution of burial customs, the evolution of

¹⁴ James Blake Bailey, *Diary of a Resurrectionist (1811-1812)* (London: Swan Sonnanschein, & Co., 1896), v-vi.

¹⁵ John Craig, *A New Universal Etymological and Pronouncing Dictionary of the English Language, Embracing all the Terms used in Art, Science, and Literature* (London: Henry George Collins, 1848), n.p.

¹⁶ “London, Jan 23,” *Sussex Advertiser* (Sussex, England), January 29, 1749, n.p. Held by the British Newspaper Archive.

¹⁷ Bransby Blake Cooper, *The Life of Sir Astley Cooper* (London: John W. Parker, 1868), 339.

medical theory, and the sale of the corpse. Initial analyses have shown a call and response pattern between society and the medical community. That is to say, the societal awareness of premature repercussions during the British Enlightenment caused the public to turn to the medical community for answers. In turn, the medical community acknowledged that people were being misdiagnosed as dead. This resulted in the evolution of the understanding of the signs, stages, and definition of death. Concurrently, the medical community had a shortage of cadavers for their anatomical dissections, so they relied on the resurrectionists to obtain the freshest cadavers available. This culminated in two sets of resurrectionist gangs (one in England, one in Scotland) to turn to murder to fulfill the requests during the 1820s-1830s. This caused the trust between the medical community and society to be broken. While the focal point of this thesis will be on the ramifications of the misdiagnosis of death and the medical community's response, the resurrectionist's involvement is worth touching on because it brings the era to completion in 1832.

This research is unique to the field because it focuses the medical theory relating to the transition of the body from life to death, as well as provides new data relating to the percentage of people who were prematurely enclosed, buried, interred, and/or dissected. Understanding the foundational research in identifying the stages of death could help modern medical scholars understand from where their concept of death derives. In the modern age of brain death, organ death, and cell death, it appears that the more we learn about the stages of death, the more idiosyncrasies need to be identified and analyzed.

This is especially important in relation to organ transplant. As will be discussed throughout this paper, in 1792, Dr. James Curry suggested that the resuscitative process be employed for a few hours to ensure that the person could not be revived, prior to pronouncing

them as dead. In addition, bodies were laid out and watched for days after they appeared to be dead in order to ensure that they were actually dead. Modernly, physicians and transplant teams only wait about 7-10 minutes after the heart stops beating before they remove the necessary organ(s).¹⁸ If modern practitioners waited as long as eighteenth century practices mandated, they would not be able to harvest organs for use. This shows that the research done in eighteenth century England provided a stable foundation for the more comprehensive study of the state of death, which occurred as medical theories advanced in the following centuries.

There has been a considerable amount of modern research done on the expansion of the definition of death, with a particular post-1960s focus in relation to brain death, organ death, and cell death. When the ad hoc committee at Harvard Medical School came together to decide if irreversible coma would count as a new criterion for death, they identified that the current criterion for death included “a total stoppage of the circulation of the blood, and cessation of the animal and vital functions consequent there upon such as respiration, pulsation, etc.”¹⁹ These indicators were signs of death that had been observed and recorded by doctors throughout the eighteenth century. Ironically, the criterion of brain death had also been identified during the eighteenth century, but the medical theory and technology of the time had not advanced to a point where it could be tested.

Although nineteenth century physicians referred to eighteenth century research on the topic to support their own theories on identifying the signs and stages of death, research comparing the published observations of the academic physicians who studied that topic has

¹⁸ Robert M. Sade, “Brain Death, Cardiac Death, and the Dead Donor Rule,” *Journal of the South Carolina Medical Association* 107, no. 4 (2011): 146–149, accessed August 31, 2018, <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3372912>.

¹⁹ “A Definition of Irreversible Coma: Report of the Ad Hoc Committee of the Harvard Medical School to Examine the Definition of Brain Death,” *JAMA* 22, no. 5 (1984), 678.

been largely overlooked. This has resulted in a lack of a medical narrative. This paper will identify the research of the core group of physicians who furthered the study of death in eighteenth century England. In order to help fill the missing narrative, the foundational signs of apparent and absolute death will be explored. In addition, the precautions that were being developed and suggested in order to test that an apparently dead person was absolutely dead are mentioned. Finally, the findings of the analysis of 155 recorded cases of apparent death and any associated premature repercussions will be explained.

Chapter 1: Preparing the Dead

“he discovered, by the moonlight, a corpse, dressed in a shroud”¹

On Sunday, August 16, 1646, Joan Bridges, a maid who lived on Newgate Street (London), went out drinking with friends. After imbibing heavily, she decided to sleep it off. The next day her sister thought Joan was in a trance – the catch-all-name for a sleep disorder where the person could not be awakened. When the sister could not wake Joan, she proclaimed her to be dead. The next day, Joan was laid into her coffin and about twenty-four hours after she was believed to have fallen into the trance, she was buried in the Rochester churchyard.

The next night, a man passing by Joan’s grave saw two dogs scratching and digging at it. He heard a noise coming from the grave but walked on when it stopped. Upon hearing the noise again, he went to people who lived nearby to let them know that Joan Bridges had been prematurely buried. Despite her siblings’ disinterest at the news, the townswomen gathered funds to exhume the body. When the coffin was opened, they found evidence that Joan had indeed been prematurely buried. The cloth that had been tied around her face was taken off, and her nose and cheeks were “beaten flat.”² The string that had tied “her toes together had torn the skin from the bone.”³ Her hands ripped “open her very bowels; her left hand sticking in her belly, and her right hand having razed [*sic*] the skin and flesh from her side.”⁴ Although some people

¹ Joseph Taylor, *Apparitions; or, the Mystery of Ghosts, Hobgoblins, and Haunted Houses, Developed* (London: Lackington, Allen, and Co., 1815), 171.

² *A Strange and Wonderfull Relation of The Burying Alive of Joan Bridges of Rochester in the County of Kent* (London, 1646), 4.

³ *A Strange and Wonderfull Relation*, 4.

⁴ *A Strange and Wonderfull Relation*, 4.

thought that Joan had been beaten prior to being buried, most who had witnessed her body be exhumed felt that the damage occurred post-burial.

Stories such as this were found throughout England, and Europe at large, between the 17th and 19th centuries. Similar stories also included near misses, wherein people had been diagnosed as dead, but recovered their senses prior to being closed into their coffin or committed to the grave. Other stories emerged about people awakening while resurrectionists were trying to steal their bodies or grave-robbers were trying to steal valuables out of their graves or tombs.

Culture regarding the burial process was in flux during the eighteenth century. Historic and growing concerns of a premature diagnosis of death caused customs such as watching the corpse during the wake to become commonplace. The tradition of waking, or ‘the wake’ began in the fourteenth century and allowed people to attend to the body and watch over it in order to ascertain if there was any sign of movement, i.e. to tell if the person was going to wake up. It also delayed the burial of the corpse enough to allow for the emergence of decay. After a corpse was declared as being apparently dead, it was cleaned and made presentable for the friends and family to come visit the body. This was done as a sign of respect for the dead, and to show the community that the immediate family had the propriety to know the proper death rituals.⁵

Once the person was properly prepared and dressed, it was customary to watch the dead until it was time to bury them. The night before the funeral, friends and family would be invited to view the corpse in a burial custom commonly known as a wake. Wealthy families would have small parties with food and drink, putting the corpse in the middle of the room so that people

⁵ Ruth Richardson, *Death, Dissection, and the Destitute* (Chicago: University of Chicago Press, 2000), 18.

could look upon it as they feasted.⁶ During the late seventeenth century, it was “customary to give guests at London funerals ... a few glasses of mulled wine both before leaving the deceased’s house and on return from the church.”⁷ Although the poor were not expected to hold gatherings, there is pictorial evidence that similar gatherings occurred. By the middle of the eighteenth century, the custom changed from a gathering of people watching the body in a communal room to the body being kept out of the way in a little used room with one person watching over it. In the latter case, the body would often be left alone.⁸ This defeated the purpose of watching the dead during the wake.

The purposes of the wake were to watch for signs of putrefaction or, if those were not noticeable, to see if the person emitted signs of life that would indicate that they had been misdiagnosed as dead. It was also an important step in order to fulfill the belief that “the noise made by those involved, as well as the lighting in the death chamber, served as a protection for the body from evil spirits.”⁹ The length of time that the body was supposed to be watched prior to burial has traditionally been reported as three days, although there were no laws specifically mandating the length of time. The necessity of waiting until the body had started to decompose had worked its way into English burial customs, and it was considered indecent and disrespectful of the dead to forgo laying the corpse out to be watched.¹⁰ Using modern science, we can theorize that the idea of a three-day waiting period came about because “the beginning stages of putrefaction can be observed after 48-72 hours.”¹¹ In the simplest terms, putrefaction is “the

⁶ Richardson, *Death, Dissection, and the Destitute*, 18.

⁷ Ralph Houlbrooke, “The Age of Decency: 1660-1760,” in *Death in England: An Illustrated History*, ed. Peter Jupp & Clare Gittings, (New Brunswick: Rutgers University Press, 2000), 192.

⁸ Richardson, *Death, Dissection, and the Destitute*, 12.

⁹ Richardson, *Death, Dissection, and the Destitute*, 23.

¹⁰ Richardson, *Death, Dissection, and the Destitute*, 12.

¹¹ Jens Amendt, et al., “Forensic Entomology in Germany,” *Forensic Science International* 11, (2000): 310.

bacterially induced breakdown of soft tissue and subsequent alteration of their protein, carbohydrate and fat constituents.”¹²

In order to properly prepare the person for viewing, it was mandatory that the deceased’s eyes be dealt with first. Social historian Ruth Richardson states that there was an omen that a “corpse whose eyes refused to close represents a threat to its kin.”¹³ Since this would have been noticed while the corpse was being viewed, those who prepared the body used pennies to weight the corpses eyes closed. It is possible that the origins of this omen derived from earlier cases of people being prematurely diagnosed as dead. The threat to the kin of the corpse could have been because the person who returned from the grave was hostile about their nearly permanent burial or interment.

After the eyes had been properly closed, the mouth would be set closed and held in place by a wide band which would wrap around the chin. Next, the arms were folded across the corpses’ stomach or chest, and the legs were straightened. In order to keep the legs straight, the corpse’ ankles were tied together with bands of fabric. These bands would be cut prior to burial, so that the spirit could easily be resurrected at the time of the Reckoning.¹⁴ Once the corpse was ready, it would be dressed either in a shroud or a winding sheet and placed in the coffin to be displayed. In addition to the traditional positioning of the body, consumerism became noticeable in burial clothes and accoutrements. Utilizing more than just the winding sheet and shroud, those who could afford it had access to a “growing range of funerary products: shrouds, coffins,

¹² B.B. Dent, et al., “Review of Human Decomposition Processes in Soil,” *Environmental Geology* 42, no. 4 (2004): 577.

¹³ Richardson, *Death, Dissection, and the Destitute*, 19.

¹⁴ Richardson, *Death, Dissection, and the Destitute*, 20.

hearses, escutcheons (coats of arms), rings, mourning clothes, and so on.”¹⁵ In all cases, it was imperative to watch the corpse because not adhering to burial rituals could cause lasting repercussions for the dead – especially the apparently dead.

Before and throughout the eighteenth century, the only definitive, observable sign of death was putrefaction. The custom was so common that it was reported on in the March 12, 1791 edition of the *Ipswich Journal*:

David Bach, a painter, travelling through Germany, was suddenly taken ill, and apparent death took place. His servants who watched his corpse after it was lain out, endeavoured [*sic*] to console themselves with the bottle. As they grew elevated, one of them proposed giving his old master a glass of liquor, which he had been far from having a dislike to when alive: this was accordingly done, and the consequence was, that he recovered and lived many years.¹⁶



Figure 1: **The Dead Alive!**¹⁷

¹⁵ Clare Gittings, “Eccentric or Enlightened? Unusual Burial and Commemoration in England, 1689-1823,” *Mortality* 12, no. 4 (2007): 326.

¹⁶ “Case from Granger’s History of England,” *Ipswich Journal* (Suffolk, England), March 12, 1791, n.p. Held by the British Newspaper Archive.

¹⁷ Henry Wigstead, *The Dead Alive!*, 1784, Wellcome Collection, London, England, <https://wellcomecollection.org/works/xxkcdgbr>.

Despite the delay in burial and the care taken to watch the body, people continued to be misdiagnosed as dead and suffer the consequences of premature repercussions. According to the physician Jean-Benigne Winslow, physicians who had faced the problem of premature burial during the time of antiquity advised that physicians and educated individuals to use all “possible Methods of recalling the Dead to Life,” and continue to look for new methods to do so.¹⁸ By reprinting this ancient request in his book, it is almost as though Winslow was resubmitting the request from the ancient scholars to the enlightened medical community. Fortuitously, Winslow’s book was published during the same decade that the British physician, Dr. John Fothergill wrote a book in support of the newly tested resuscitative process. The close proximity of the publication dates between the two books may have contributed to the interest of the academic medical community in using the resuscitative process to decrease the amount of people being prematurely buried.

When it came to the actual burial of the body, the economic differences became more apparent. Most bodies were buried in parish churchyards, yet depending on the socio-economic class, they were buried differently. Depending on the family’s resources, these bodies may have been buried in a coffin, or the body may have been placed directly into the soil. In some cases, more than one body was placed within the same coffin. Those of the subjectively middle class or lower gentry could bury their dead in smaller churchyards located in the suburban areas of the bigger cities – such as London. Rather than burying their dead in the ground, the rich had the ability to finance the burial of their dead in vaults, shafts, or mausoleums. In these cases, the structures were often lined with bricks or stone in order to protect the body from being moved or

¹⁸ Jean-Benigne Winslow, *The Uncertainty of the Signs of Death and the Danger of Precipitate Interments and Dissections* (London: The Globe, 1746), 28.

crowded and allowed the family control over who gained entrance to the bodies that were buried there. The rich also had the ability to hire people to watch the place where they had chosen to bury their family. Those hired would be responsible for ensuring that resurrectionists did not remove the body.

Chapter 2: Obtaining Cadavers for Medical Study

“they watched the motion of those *resurrection* men,
and presently saw them open the coffin”¹

Between 1540 – 1832, the laws which allotted the number of cadavers that could legally be given to surgeons and anatomists to advance the understanding of medicine grew from 4 to virtually unlimited. Beginning in 1540, King Henry VIII proclaimed that the bodies of four felonious criminals could be taken from the gallows and used for anatomical dissections by the Barbers and Surgeons of London; this number increased to 6 under Charles II (1663).² In 1625, the scholar and statesman Hugo Grotius wrote his *On the Law of War and Peace*, in which he indicated that right to be properly buried could be withheld from the worst of criminals because the bodies were considered to be property of the state. This premise coupled with allowances like those set forth by King Henry VIII and King Charles II made gathering bodies from the scaffolds for anatomical use a normality in England. A review of the Bills of Mortality from 1700 – 1758 revealed that only 834 people had been executed for murder during that 58-year period, with an average of 14 bodies per year. That, coupled with the growing popularity of medical schools and the general study of medicine, meant that the number of cadavers supplied legally did not meet the amount demanded.

The Royal College of Physicians of London (RCP) has receipts for the costs associated with picking up bodies from executions and bringing them back to the College, presumably for dissection. As per a decree, made by Charles Goodall, President of the RCP in 1709, the bodies

¹ “Tuesday’s Post,” *Ipswich Journal* (Suffolk, England), July 1, 1786, n.p. Held by the British Newspaper Archive.

² Anno 32, Henry VIII, c. 42, 43. Held by Parliamentary Archives.

that were taken and used were to be “decently buried at the cost and Charges of the said Profit Colleges or Community.”³ The burial of those who had committed crimes against oneself, such as self-murder (suicide), or felonious acts against others were handled differently than burials of those who had lived virtuous lives. Corpses of those who had killed themselves could not be dissected, nor could they be buried in a churchyard, unless a coroner’s jury had concluded that the death was due to insanity.⁴ Thomas Laqueur explains that the “refusal to properly bury a corpse... constituted a posthumous exclusion from the cultural and political order, an obliteration of personhood after death.”⁵ This was why, after criminals had been executed at the gallows, their bodies could be given to medical professionals for academic study or, later, to surgeons for public dissection.

Proof of post-dissection burials were discovered when the Museum of London Archelogy (MOLA) excavated Royal London Hospital’s graveyard in 2006. They found that 144 of the 273 excavated graves contained portions of bodies from an estimated 500 individuals.⁶ These body parts were predominantly from men, but the remains of women, children, and fetuses were also discovered. The remains showed signs of dissection, such as “craniotomies, vertebral transition at the neck or lumbar spine,... pelvic hemisection... and thoracotomies.”⁷ The RCP also has two receipts from 1694 which included the costs for: transportation of the body, assistance, the coffin, cleaning the fabric that the body was wrapped in, burial of the body, washing the

³ Copy of a Warrant of the President, Dr. Charles Goodall, to the Sheriffs of the City of London and Sheriff of the County of Middlesex, 1709, RCP-LEGAC/ENV 27, Royal College of Physicians of London.

⁴ Thomas W. Laqueur, *The Work of the Dead: A Cultural History of Mortal Remains* (Princeton: Princeton University Press, 2015), 149-150.

⁵ Laqueur, *The Work of the Dead*, 148.

⁶ Piers D. Mitchell et al., “The Study of Anatomy in England from 1700 to the Early 20th Century,” *Journal of Anatomy* 219, no. 2 (2011): 94.

⁷ Mitchell, “The Study of Anatomy in England,” 94.

operating theatre, drinks, and supplies. The final costs associated were 2 pounds, 15 shillings, 8 pence & 3 pounds, 14 shillings, 3 pence. This holds the 2017 equivalency of approximately £334 - £445, or \$430 - \$573.⁸

The number of bodies allowed to be used for anatomical dissections increased again in 1752 when King George II approved the ‘Act for better preventing the horrid Crime of Murder,’ which allowed for the executed bodies of all murders to be used by the Company of Surgeons, or their designee, for medical dissection.⁹ Judges were given the option of sentencing the criminal to either having their body anatomized or publicly dissected after it had been hung until dead.¹⁰ In either case, the body could not be buried until one of these actions had occurred. If the person had been sentenced to be anatomized, the body would then be used for academic study. If the person had been sentenced to be anatomized and dissected, the body would be anatomized to validate that the body had died during the execution and then be publicly dissected as an act of postmortem punishment. The law was created to act as a deterrent to commit murder, and it worked. Those of the working and poor classes in both England, and by extension America, responded with fear for their immortal souls. The educated jurors, however, recognized the extreme nature and long-term, religious ramifications of the law, and used it sparingly. History of death scholar, Elizabeth Hurren, calculated that the bodies of 923 convicts were brought before the court, were executed and sentenced to postmortem dissection between 1752 and 1832.¹¹ Despite this Act, the gap between the number of bodies needed and the number of

⁸ “Currency Converter: 1270-2017,” The National Archives, last modified 2018, <https://www.nationalarchives.gov.uk/currency-converter>.

⁹ Anno 25, George II, c. 67. Held by Parliamentary Archives.

¹⁰ Laqueur, *The Work of the Dead*, 337.

¹¹ Elizabeth T. Hurren, “‘Other Spaces’ for the *Dangerous Dead* of Provincial England, c. 1752-1832,” *Journal of the Historical Association* 103, no. 354 (2018): 29.

bodies legally available persisted. In order to fill in the gap, medical professionals turned to resurrectionists.

Resurrectionism, the action of taking a corpse from the grave for the purpose of dissection, was instrumental in the ability for medical practitioners to conduct their experiments and push the boundaries of scientific medicine during the eighteenth and nineteenth centuries. Despite its necessary connection to the medical community, resurrectionists tended to work under the cover of night and bodies were exhumed “by stealth.”¹² The acceptance of the role of the resurrectionist increased throughout the eighteenth century and laws were created to protect the process. In 1749, Thomas Hayes was indicted “for taking dead Bodies out of the several Church-Yards in and about Town, and selling them to Surgeons.”¹³ Hayes was sentenced to serve six months in Newgate prison and pay a fine. His punishment was to serve as a warning that the court believed that the exhumation of corpses for medical study was “unnatural Behavior,” and declared that future punishments would be more severe.¹⁴

In 1786, this story was published in the *Ipswich Journal* and depicted resurrectionists at work:

About 12 o'clock at night, Mr. Tankard and his man coming by the church-yard, observed some men a digging, and a cart standing by, they watched the motion of those *resurrection* men, and presently saw them open the coffin and take out the *body*, which consisted of upwards of 500 pieces of muslin, and various other contraband articles. Mr. Tankard suffered them to proceed with the *corpse* till they came to Ratcliffe-cross, where he got assistance, and seized the whole.¹⁵

¹² John Craig, *A New Universal Etymological and Pronouncing Dictionary of the English Language, Embracing all the Terms used in Art, Science, and Literature* (London: Henry George Collins, 1848), n.p.

¹³ “London, Jan 23,” *Sussex Advertiser* (Sussex, England), January 29, 1749, n.p. Held by the British Newspaper Archive.

¹⁴ “London, Jan 23,” n.p.

¹⁵ “Tuesday’s Post,” 1786, n.p.

This story is unique because it indicated that more than one man was present as the body was exhumed, thereby supporting other reports that resurrectionists worked in groups. In addition, it mentions the accoutrements beyond the winding sheet (muslin) that had been buried with the body. Finally, Mr. Tankard permitted the resurrectionists to think that they had acquired the body, when in the end it was taken from them. This showed that the casual observer was not accepting of their trade.

As evidenced in the 1786 article, resurrectionists tended to work in groups. These groups were called companies, which were comprised of 3 – 15 men. It was rumored that the more seasoned resurrectionists could remove two bodies from different graves in less than an hour and a half, including placing the coffins back in the grave and filling the hole.¹⁶ It was important for them to leave the coffin, shrouds, cloths, clothes, or any material possessions that the corpses were buried with because these items were considered to belong to the family of the deceased. The *Rex v. Lynn* (1788) case ruled that civil action could not be taken against someone who violated or disturbed the actual remains of the dead. This was because the corpse was considered to be abandoned property, so the removal of a corpse from the grave was classified as the misdemeanor “public indecency” rather than the felony of theft.¹⁷

Societal allowances, like those that resulting from the *Rex v. Lynn* case, made it easier for resurrectionists to exhume freshly buried bodies without being confronted by groundskeepers or the voluntary police force of London. In 1795, a company of fifteen resurrectionists who worked out of the London borough of Lambeth was exposed to the public. These resurrectionists only

¹⁶ Bransby Blake Cooper, *The Life of Sir Astley Cooper, Interspersed with Sketches from his Notebook* (London: J.W. Parker, 1843), 352.

¹⁷ Sarah Wise, *The Italian Boy: Murder and Grave-Robbery in 1830s London* (London, Jonathan Cape, 2004), 31; Richard Burn, *The Justice of the Peace, and Parish Officer* (London: A. Strahan, 1830), 353. Statute: *Rex v. Lynn, M. 1788, 2 T. R. 733.*

worked during the winter, because the cold helped preserve the bodies, and sold their wares to eight reputable (but unnamed) surgeons. Other resurrectionists exhumed bodies from hospital graveyards and then sold the bodies back to medical professionals.¹⁸

The cost of buying a body bought from a resurrectionist was less expensive than the costs associated with picking up a body from an execution, even though the body itself was free. For example, the Lambeth gang charged “two guineas and a crown” for adult bodies, and “six shillings for the first foot, and nine [pence] per inch” for children’s bodies, the latter of which was the same amount as two days’ pay for a skilled tradesman.¹⁹ The 2017 equivalent of the cost of an adult body is ~£180 and a starting rate of ~£26 for a child’s body. Preference was given to fresh bodies, as well as bodies with anatomical differences. These differences could have been as normal as pregnancy or as different as malformations. As the demand for cadavers continued, resurrectionists began to raise the cost of the bodies that they supplied.²⁰ Doctors had no recourse but to pay the prices demanded. If they did not, they risked losing students to professors who could adequately supply their students with what was considered cutting edge materials for their anatomical studies.

An increase in the interest of the study of anatomy led to increased attendance in medical schools in eighteenth century London. As the interest in medical education increased, so too did the need for cadavers. John Abernethy, a surgeon working at St. Bartholomew’s Hospital in London explained to his students that “[there] is but one way to obtain knowledge... we must be companions with the dead.”²¹ Macabre though that may sound, the concept was not uncommon.

¹⁸ Mitchell, et al., “The Study of Anatomy in England,” 94.

¹⁹ Ruth Richardson, *Death, Dissection, and the Destitute* (Chicago: University of Chicago Press, 2000), 57.

²⁰ James Blake Bailey, *Diary of a Resurrectionist, 1811 - 1812* (London: Swan Sonnanschein & Co., 1896), 64.

²¹ Helen McDonald, *Human Remains: Dissection and its Histories* (New Haven: Yale University Press, 2005), 11.

The London surgeon Sir Astley Cooper explained that by examining corpses that had been killed by disease, it allowed doctors to learn about the progression of a disease without having to perform the same examinations on the living.²² Continuing to build on the foundation of hands-on learning that had been set in place by Paracelsus and Vesalius, the use of cadavers helped advance the study of anatomy to an empirical rather than theoretical study.

The anatomist William Hunter was considered to be one of the most prolific anatomists of the eighteenth century. His passion for anatomy caused him to expand his skills into surgery and obstetrics. During his lifetime he was a member of the Royal Society in both London and Paris, and a member of the Society of Antiquaries. In 1764, he was “appointed Physician Extraordinary to Queen Charlotte,” a position which he held until 1783.²³ His findings contributed to several areas of medicine and surgery including the gravid uterus, morbid anatomy, and cardiology. He was so devoted to furthering the study of anatomy that he quite literally worked himself to death. In 1783, William Hunter collapsed while teaching one of his lectures; he died ten days later.

William Hunter was also a strong proponent of the use of cadavers in anatomical studies. During his last lectures, he cautioned that corpses needed to be as fresh as possible when they were being used for anatomical study. He identified that for “every hour that it is kept, it is losing something of its fitness for anatomical demonstrations.”²⁴ He went on to explain the importance of receiving the corpse quickly after death, stating that after 8-10 days the corpse

²² McDonald, *Human Remains*, 12.

²³ “William Hunter,” University of Glasgow, last modified 2018, <https://www.universitystory.gla.ac.uk/biography/?id=WH0015&type=P>.

²⁴ William Hunter, *Two Introductory Lectures, Delivered by Dr. William Hunter, to his Last Course of Anatomical Lectures, at his Theatre in Windmill-Street: As They Were Left Corrected for the Press by Himself* (London, 1784), 87.

would be “of little use.”²⁵ Over his lifetime, Hunter increased the number of classes he taught until he reached courses that contained almost 100 lectures over a three month period during the 1780s; and, he used 6 corpses per course.²⁶ Even if students only obtained one cadaver per three month lecture period for a year during Hunter’s most prolific years, at least 28 cadavers would be required for himself (24) and his students (4) annually.

Hunter’s staunch support of the practice of using several cadavers per lecture came from his own experiences attending anatomy lectures throughout western Europe. Throughout his years of study, he had attended several anatomy courses, most of which only allowed for 1-2 corpses, total. He found that this impeded his ability to apply the information that he was learning because there was no direct correlation between the lecture and the body. Therefore, he used “a number of dead bodies for one course,” in order to allow students to observe body parts in various stages of health.²⁷ That is to say, that some cadavers may have been affected by disease, and others could have been comparatively healthy. In the cases of cadavers that had unhealthy body parts, students would be able to observe them in various stages of disease progression.

In 1798, approximately 300 anatomy students were studying in London.²⁸ By 1823, that number had increased to approximately 1,000, and then decreased to approximately 800 by 1828.²⁹ Although there were ~800 anatomy students studying in London by 1828, only ~500 of them needed cadavers for dissections. It was approximated that each of the 500 students would

²⁵ Hunter, *Two Introductory Lectures*, 88.

²⁶ Anita Guerrini, “The Value of a Dead Body,” in *Vital Matters: Eighteenth-Century Views of Conception, Life, and Death*, ed. Helen Deutsch and Mary Terrall (Toronto: University of Toronto Press, 2012), 250.

²⁷ Hunter, *Two Introductory Lectures*, 88.

²⁸ The House of Commons, *Report from the Select Committee on Anatomy* (London, 1828), 4.

²⁹ The House of Commons, *Report from the Select Committee*, 4.

need at least three cadavers throughout the sixteen-month medical program. With a minimum of 1,500 cadavers needed per sixteen months, for students alone, obtaining cadavers legally wasn't possible. However, some doctors received more than they bargained for when it was discovered that the bodies that they had purchased were still alive.

Such was the case for John Macintyre, who had the unfortunate experience of being proclaimed apparently dead in 1824 and awoke on the autopsy table. In a story told from the first-person perspective, Macintyre recalled losing the ability to move and hearing the nurse proclaim him to be dead. He recalled being placed in his coffin, travelling to the cemetery and being lowered into his grave. After hearing the dirt be shoveled on top of his coffin, he was certain that he would die. However, resurrectionists dug him up and brought him to a local medical school. Macintyre's account claimed that:

Being rudely stripped of my shroud, I was placed naked on a table. In a short time I heard by the bustle in the room that the doctors and students were assembling. When all was ready the Demonstrator took his knife, and pierced my bosom. I felt a dreadful crackling, as it were, throughout my whole frame; a convulsive shudder instantly followed, and a shriek of horror rose from all present. The ice of death was broken up; my trance was ended. The utmost exertions were made to restore me, and in the course of an hour I was in full possession of all my faculties.³⁰

Rumors started circulating about those who were apparently dead being buried and coming back to life when grave-robbers tried to steal valuables out the tomb or coffin as well. The following story was reported to Dr. William Hawes – a well-respected physician and medical administrator in eighteenth century London. Hawes then included it in the 1787 report of the Royal Humane Society: the mother of a lady who lived in Hertfordshire was brought back “to life after interment [*sic*] by the attempt of a thief to steal a valuable ring from her finger.”³¹

³⁰ Bailey, *Diary of a Resurrectionist*, 68.

³¹ William Tebb, *Premature Burial and How it may be Prevented* (London: Swan Sonnanschein & Co., 1905), 379.

The storyline was simple, but the retelling of the story has a specific element that has a ring of truth to it. Primary sources from the time use the words “premature burial” to explain that which had been buried into the ground, and “premature interment” to explain those who had been interred into a vault, which was much more expensive and could only be afforded by the rich. If this woman was of a respected lineage, her mother would have been interred in the family tomb. The grave robbers in this story had been after the jewels that the woman was buried with, rather than the corpse of the woman herself. In a way, she was lucky that they had broken into her vault and tried to take her ring. She may not have woken up otherwise. Or, when she did awaken, she would have been trapped with no way to escape. Since it is plausible that corpses were coming back to life when grave-robbers were disturbing the grave, it’s possible that they were doing so when resurrectionists were disturbing the body. Three of the sketches presented in the *Uncertainty and Signs of Death* (1746) were of people coming back to life when a resurrectionist opened the coffin. The picture below shows someone opening a coffin inside of a mausoleum or tomb.



Figure 2: The Signs of Death³²

³² *Illustrated Plate - The Signs of Death*, 1746, Wellcome Collection, London England, <https://wellcomecollection.org/works/ag9g92sf>.

In 1828, a select committee was created in the House of Commons to discuss how medical schools obtained cadavers. Hearing evidence from “distinguished members of the medical profession, a number of magistrates, and three unnamed resurrectionists,” the Committee considered the increased need for cadavers for medical training and the limitations of the current laws.³³ They recommended that the bodies of people who were “maintained at the public charge,” and who were unclaimed after they died in “charitable institutions” such as workhouses, penitentiaries, prisons, and hospitals, be turned over to the anatomists for dissection.³⁴ The Committee reviewed the number of people who had died at the St. Giles in the Field workhouse (London) in 1827-1828. They determined that of the 585 people who had died and been buried at the expense of the parish, 20%, or 117, were unclaimed. It was believed that by turning the bodies over to anatomists – who were then responsible for the proper burial of the body post-dissection – it would save the parishes’ money and increase the number of legal bodies that could be given to medical schools for study. Despite a bill being drafted with the support of the select committee, the motion was not passed due to concerns about the poor not receiving proper Christian burials.³⁵

The business of the corpse as a commodity continued to grow throughout the early nineteenth century, finally coming to a head, coincidentally, in 1828. As the select committee discussed and debated changing the laws relating to cadavers, some resurrectionists turned to burking as a method to get the freshest bodies on the market. Burking occurred when resurrectionists killed people in order to supply the freshest corpses to the medical community.

³³ John Knott, “Popular Attitudes to Death and Dissection in Early Nineteenth Century Britain: The Anatomy Act and the Poor,” *Labour History*, 49 (1985): 5.

³⁴ The House of Commons, *Report from the Select Committee*, 9.

³⁵ Knott, “Popular Attitudes to Death and Dissection,” 6.

In 1828, William Burke and William Hare were convicted of murder in order to supply Dr. Robert Knox with the freshest corpses for his anatomical dissections. During the 1830s, the British resurrectionists John Bishop and Thomas Williams also transitioned from resurrectionists to murderers. These radical methods seemed to have broken an unspoken trust, which resulted in Parliament reviewing the points that had been discussed by the select committee in 1828. In 1832, the Anatomy Act was passed into law and included the stipulation that the post-dissection remains would have a Christian burial.³⁶

The trust broken by the resurrectionists and the subsequent legal changes had social effects as well. The Anatomy Act, itself, had its own opposition. Doctors, politicians, and the public were concerned about the fear that the Act would inspire and backlash against the medical profession. The editor of the *Lancet*, Thomas Wakley stated that the Anatomy Acts would add to the public's distrust of dissection because the poor would come to believe that their bodies would be sold, rather than donated, and people would profit from their death.³⁷ In fact, a newspaper article from 1823 indicated that resurrectionists were already filching corpses from the workhouses by pretending to be acquainted with the departed. Upon receipt of the body, they would promptly sell it to an anatomist or school.³⁸ Most interestingly, the politician Henry Hunt pointed out that despite William Hunter's support and usage of using cadavers for dissection, he requested that he not be dissected when he died.³⁹

The public fear of their corpses being sold to anatomists intensified when the cholera epidemic struck London in 1832. Because this occurred over 30 years prior to the developments

³⁶ Knott, "Popular Attitudes to Death and Dissection," 7.

³⁷ Knott, "Popular Attitudes to Death and Dissection," 7.

³⁸ Bailey, *The Diary of a Resurrectionist*, 55.

³⁹ Lord Hansard, "Schools of Anatomy," *Parliament*, 9 (1831): 302, accessed November 27, 2018, https://api.parliament.uk/historic-hansard/commons/1831/dec/15/schools-of-anatomy#column_302.

made by Lister and Koch to develop a provable germ theory, misunderstandings about what caused cholera arose. Rumors speculated that the epidemic was a ploy by the medical community to gain more bodies by forcing the sick to go “into special hospitals where they could be dissected.”⁴⁰ People began to riot in Manchester when it was discovered that the head of a child, who had died at the Swan Street Cholera Hospital, had been taken and replaced with a brick prior to the burial of the body. The bond between resurrectionists and the medical community, which been imperative for medical study to continue and advance during the previous century, now bound them together in public scrutiny. Not only did the public mistrust the work habits and morale of the resurrectionists, they doubted the medical community at large.

⁴⁰ Knott, “Popular Attitudes to Death and Dissection,” 8.

Chapter 3: The Body, the Soul, and the Definition of Death

“here souls challenge the greenish death”¹

An anonymously written pamphlet (1661) told the story of Laurence Cawthorn, a butcher from New-Gate Market, London, who fell into a deep sleep and was hastily buried, despite reports that he opened his eyes and that his body was still warm. For two days after he was buried in a shallow grave of the common yard of Christ’s Church, shouts and noises of distress were heard coming from his grave. On the third day, he was exhumed and was found to have torn open his burial shroud and that his eyes were swollen “and the brains beaten out of the head and clots of blood were to be seen at the mouth, and the breast all over black and blew [*sic*].”²

The concept that “death is an irreversible condition” was understood during the eighteenth century.³ What was not understood was what transpired to transition the body from life to death, and when precisely the body reached the point where it could no longer come back to life. Relevant research done during this era advanced the following five topics.

1. Identification of the differences between the signs of life and death.
2. Identification of the transitional stages between life and absolute death.
3. Update the tests for life and/or death.
4. Begin to correlate a comprehensive clinical definition of death.
5. Perfect and disseminate the resuscitative process.

¹ Ana Graciela Alzaga, et al., “Charles Kite: The clinical epidemiology of sudden cardiac death and the origin of the early defibrillator,” *Resuscitation* 62 (2005): 7.

² *The Most Lamentable and Deplorable Accident which on Friday last June 22. Befell Laurence Cawthron a bucher in St. Nicholas Shambles in Newgate Market, who being suspected to be Dead, by the two hasty covetousness and cruelty of his Land-lady Mrs. Cook in Pincock-lane, was suddenly and inhumanely buryed* (London, 1661), 16.

³ Seema K Shah, et al., “Death and Legal Fictions,” *Journal of Medical Ethics* 37, no. 12 (2011): 720.

Prior to the eighteenth century, the signs of life and death typically ran opposite of each other. Since breathing was considered to be a sign of life, the absence of respiration was considered to be a sign of death. Therefore, if a person could be made to sneeze, they were considered alive. But, if they did not have the sneeze reflex to a stimulus, they were assumed to be dead. There were two types of signs of life: 1) signs of general life, and 2) signs of restored life. Signs of general life included: breathing, a heartbeat, pink color in the lips and cheeks, bleeding from the wrists (to show circulation), muscles remaining soft and pliable, digestive, urinary, and bowel functions, and the ability to rouse from sleep. In contrast, signs of restored life typically referred to twitching of the hands or mouth, mumbling, or an onlooker seeing the chest of the apparently dead rising and falling as though they were breathing. The continued and widespread reports of premature repercussions made the medical community realize that the tests that they had been using were not good enough. As the signs of life and death were identified and medical advancements were made, the medical community was able to enhance and update the tests for death, most especially with the inclusion of the resuscitative process.

During this time, it was identified that death was not an immediate occurrence, but a transition. The commonly accepted stages that transpired from life to death consisted of life, apparent death or suspended animation, and absolute death. When a person first looked like they might be dead, they were considered to be apparently dead. At that time, they were tested for sensory responses in ways that were not necessarily pleasant, but also not dangerous for the patient. Prior, less efficacious, tests included putting “the flame of a wax-candle to the mouth and nostrils,” to see if the breath cause the flame to move.⁴ It was considered to be more

⁴ Jean-Benigne Winslow, *The Uncertainty of the Signs of Death and the Danger of Precipitate Interments and Dissections* (London: The Globe, 1746), 14.

accurate to using “fine wool or cotton,” which sometimes yielded a false positive for death.⁵

Circulatory tests that were deemed ineffectual including blistering or burning the skin in order to stimulate the blood.

Advancing from the aforementioned tests, the following evolved as more trustworthy ways of testing if a person was in a state of apparent death. The olfactory sense would be tested by holding pungent scented items under their nose.⁶ A piece of glass or a mirror would be held in front of the person’s nose or mouth to test for breath. Circulation would be tested for by cutting a vein in the wrist in order to see if blood was still circulating or had coagulated in the body. Or, the toes of the apparently dead would be pricked with pins in order to see if the muscles in the foot would twitch.

While using primary sources to explain how death was tested for during the eighteenth century is customary, modern proof of the use of these techniques is harder to find. However, in 1997, Georges Leonetti and his team from the Université de la Méditerranée published their findings regarding the use of pin implementation to test for death during the 1722 plague outbreak in France. Approaching the study from an anthropological perspective, the team studied 200 human skeletons that were removed from a mass grave in Marseilles. Two of the skeletons had bronze pins at the top of the big toe. Based on the placement of the pins, the team hypothesized that “the pin had been introduced under the big toenail.”⁷ The presence of these pins helps give validity to the idea that the rest of the tests for death were also practiced.

⁵ Winslow, *The Uncertainty of the Signs of Death*, 14.

⁶ William Tebb, *Premature Burial and How it may be Prevented* (London: Swan Sonnanschein & Co., 1905), 305.

⁷ Georges Leonetti, et al., “Evidence of Pin Implementation as a Means of Verifying Death During the Great Plague of Marseilles (1722),” *Journal of Forensic Science* 42, no. 4 (1997): 745.

Beyond testing for death, the importance of understanding the signs of death, and conversely the signs of life, were equally as important. This was made clear in the case of Mrs. Fudge, which occurred in Cornwall, England, and was recorded in was recorded in Alexander Johnson's *A Collection of Authentic Cases Proving the Practicability of Recovering Persons Visibly Dead* (1775). He explained that Mrs. Fudge was an eighty-year-old woman whose health had been failing for some time, and finally appeared to be dead. Prior to dying she had insisted that there be a two-day delay in her burial. While the body was being prepared there were conflicting responses to tests for death. When some warmth was felt in in "the middle of her back," her friends "applied a mirror to her mouth; but after repeated trials, could not observe it in the least stained... and, in short she had every appearance of a dead person."⁸ Her body was laid out in a room in a room with the windows open. That evening, "the heat seemed to increase, and at length she was seen to breathe."⁹

An article in the April 2, 1741 edition of the *Stamford Mercury* reported that "the Right Hon. the Earl of Waldegrave, who had been given over by his Physicians (which occasion'd the Report of his being dead) is now said to be a little better."¹⁰ Misunderstandings such as this occurred not only due to the budding tests for death, but also because of the ambiguous definition of death. Beyond the medical concepts of actual and apparent death, there was a profound lack of basic understanding of what, precisely, constituted death. The 1771 edition of

⁸ Alexander Johnson, *A Collection of Authentic Cases Proving the Practicability of Recovering Persons Visibly Dead by Drowning, Suffocation, Stifling, Swooning, Convulsions, and Other Accidents* (London: John Nourse, 1775), 126.

⁹ Johnson, *A Collection of Authentic Cases*, 126.

¹⁰ "London, March 28," *Stamford Mercury*, (Lincolnshire, England), April 2, 1741, n.p. Held by the British Newspaper Archive.

the *Encyclopedia Britannica* simply defined death as, “the separation of the soul and body; in which sense it stands opposed to life, which consists of the union thereof.”¹¹ Likewise the *New Universal English Dictionary* defined death as “the departure of the soul from the body. Loss of sensibility, motion, and all the functions of animal life. Figuratively, the state of the dead. Murder, or depriving a person of life by violent and unlawful means. The cause of death... In divinity, a state of insensibility, so as not to be seduced by allurements of any kind, used with unto.”¹² The term ‘animal life,’ and by extension animal or natural heat, vitality, or instinct, came about as medical and naturalist scholars tried to understand how “natural kingdoms were arranged,” and how God fit into the bigger picture.¹³ The need to do so was brought on by increased exploration and empirical expansion during the century, which brought new places, people, animals, plants, concepts, and experiences into the British perspective. Generally speaking, ‘animal’ concepts referred to the automatic functions of the body, such as awareness, body temperature, or breathing.

The advancement of the definition of death was contingent on the research being done by physicians who worked to identify the specific signs of death and the signs of the transition from life to death. While many physicians and scholars worked towards this goal, the work of Drs. John Fothergill, Alexander Johnson, Charles Kite, James Curry, and Anthony Fothergill, were regularly quoted and cited in other sources.

¹¹ A Society of Gentlemen in Scotland, *Encyclopaedia Britannica; or, a Dictionary of Arts and Sciences, Compiled upon a New Plan* (Edinburgh: A. Bell and C. Macfarquhar, 1771), 309.

¹² William Rider, *A New Universal English Dictionary or, A Compleat Treasure of the English Language* (Oxford: W. Griffin, 1759), n.p.

¹³ Susannah Gibson, *Animal, Vegetable, Mineral? How Eighteenth-Century Science Disrupted the Natural Order* (Oxford: Oxford University Press, 2015), 4.

The first of this list, Dr. John Fothergill, was a highly educated and respected British physician, who also happened to be a friend of the aforementioned William Hunter. After obtaining his degree in Edinburgh, he became a member of the London College of Physicians (1744), the Royal Society of Antiquaries (1753), the American Philosophical Society (1776), and the Société Royale de Médecine in Paris (1776). He wrote prolifically on a number of topics including sore throats, headaches, migraines, influenza, angina pectoris, and several neurological conditions. And, despite the invention of the resuscitative process often being credited to the Society for the Recovery of Drowned Persons in Amsterdam and/or London, his thoughts on the method of resuscitation predates the Society by over 20 years.

In 1745, John Fothergill wrote his book *Observations on the Recovery of a Man Dead in Appearance by Distending the Lungs with Air* which included steps to revive someone who had died to a lack of air (drowning, suffocating, etc.).¹⁴ In this book, J. Fothergill reprinted a case which was originally published in the Edinburgh publication *Medical Essays* (1744). Titled “A Man, Dead in Appearance, Recovered by Distending the Lungs with Air,” this case was originally authored by Scottish surgeon William Tossack, who had revived a man who had been “suffocated by *nauseous Steam*.”¹⁵ After showing signs of apparent death for 30-45 minutes, Tossack reported that the man’s eyes were open and staring, his mouth was opened wide, his skin was cold, and neither a pulse nor breathing could be detected.¹⁶ In response, Tossack used a technique that would later become known as the resuscitative process. By applying “his Mouth

¹⁴ Oxygen was discovered by the Swedish chemist Carl Scheele in 1772 and British chemist Joseph Priestley in 1774. It was named by the French chemist Antoine Lavoisier. This is why the terminology is ‘air’ rather than ‘oxygen.’

¹⁵ John Fothergill, *Observations on the Recovery of a Man Dead in Appearance by Distending the Lungs with Air* (London, 1745), 4.

¹⁶ Fothergill, *Observations on the Recovery of a Man Dead in Appearance*, 4.

close to the Patient's, and, by blowing strongly, holding the Nostrils at the same time, raised his Chest fully by his Breath, the patient's heartbeat strengthened until it was detectable."¹⁷ Next, Tossack "opened a Vein in his Arm; which, after giving a small Jet, set out the Blood in Drops only for a Quarter of an Hour, and then his bled freely," while Tossack rubbed the patient's muscles.¹⁸ Within an hour, the patient was revived, and by the end of the day was able to walk home.

J. Fothergill reported that this was the first time that he could recall that "an artificial Inflation of the lungs... was applied to the happy Purpose of rescuing [human] Life from such imminent Danger."¹⁹ He went on to give his observations on the resuscitative method as described, explaining that bleeding should only be used as a last recourse with the intention of stimulating the heart back into motion and that the rubbing of the body was used in order to stimulate the fluidity of the blood. In the event of drowning, he suggested that Tossack's method be applied to the patient "after the Body has been discharged of the Water admitted to it, by placing it in a proper Position, the Head downwards, prone, and if it can be, across a Barrel Hogshead, or some such-like convex Support, with the utmost Expedition."²⁰ Overall, he considered the method to be promising, especially in cases of suffocation, lightning strikes, suicide by hanging, and drowning.

The publication of J. Fothergill's support of the resuscitative method denoted a turning point in the study of medicine. His publication of Tossack's case and methodology made the concept of the resuscitative process accessible to a wider audience of medical scholars,

¹⁷ Fothergill, *Observations on the Recovery of a Man Dead in Appearance*, 4.

¹⁸ Fothergill, *Observations on the Recovery of a Man Dead in Appearance*, 4.

¹⁹ Fothergill, *Observations on the Recovery of a Man Dead in Appearance*, 4-5.

²⁰ Fothergill, *Observations on the Recovery of a Man Dead in Appearance*, 7.

especially throughout England. In addition, the acceptance of said process by such a well-respected physician likely increased its validity to other medical professionals who respected J. Fothergill's work and opinion.

Dr. Alexander Johnson published several books on the use of the resuscitative process throughout Europe, including France, Austria, Italy, and England. Although he was a strong proponent for the resuscitative process, he was not recorded as a member of the Royal Humane Society, which was previously known as the Society for the Recovery of Drowned Persons. However, Johnson's research made it evident that he was dedicated to identifying of the signs of death and furthering the use of the resuscitative practice, even going so far as to set the process to verse in 1789 so that it could be easily recalled. Four years prior, Johnson identified the signs of death as a person having lay "in a swoon, without breathing, and without a discoverable circulation of blood, or action of the heart and lungs; that all motion and sensation have ceased, with a gradual diminution of natural heat" for over an hour.²¹ However, despite the presence of the signs of death, Johnson assured the reader that the person would be able to be revived when certain parts of the body were gently irritated and stimulated. He believed that the irritation and stimulation of the body were viable tests for death and could prevent premature interment. If there was an absence of response to the stimuli, the person was "deemed absolutely dead, and may be safely consigned to the grave."²²

Dr. Charles Kite was a British surgeon and a scientist during the late eighteenth century, who noticed the connection between those who exhibited signs of apparent death due to drowning and the ability to be revived using the resuscitative process. The title page of his *An*

²¹ Alexander Johnson, *Dr. Johnson's Abridged Instructions of Recovering Persons Apparently Dead* (1785), 1.

²² Johnson, *Dr. Johnson's Abridged Instructions*, 1.

Essay on the Recovery of the Apparently Dead (1788) included the following statement, ““*hac animas ille evocat Orco Pallentes,*” meaning “here souls challenge the greenish death.”²³ This was a very powerful statement because it spoke directly to the separation of the soul from the body and putrefaction, which were considered the predominant signs of absolute death. Therefore, the ‘soul’s challenge’ refers to the soul’s fight to remain in the body and keep the person alive. Kite believed that death could be classified as apparent or absolute. He defined apparent death as “a stoppage of the circulation, respiration, and action of the brain; the irritability, however, or that peculiar property of the muscular fibres [*sic*] which enables them to contract on being irritated, still remaining.”²⁴ He defined absolute death as “a cessation of the vital, natural, and animal functions, but where the principle of irritability is also destroyed.”²⁵ He also pointed out that the definitions were so similar that the only variable separating them was “the irritability, or what has been called, the vital principle.”²⁶ That the vital principle was also referred to as the soul, which was believed to be the essence of life within a person.²⁷ By naming the difference stages of when the signs of death appeared (apparent death) and when the person could no longer be revived (absolute death) Kite enabled future research of these concepts to be either mutually inclusive or exclusive. Although future scholars continued to compare the differences between apparent death and absolute death, they now had the ability to write chapters on each rather than reporting their observations in succinct paragraph form.

²³ Alzaga, “Charles Kite,” 7.

²⁴ Charles Kite, *An Essay on the Recovery of the Apparently Dead* (London: C. Dilly in the Poultry, 1788), 107-108.

²⁵ Kite, *An Essay on the Recovery*, 107-108.

²⁶ Kite, *An Essay on the Recovery*, 107-108.

²⁷ James Cowles Prichard, *A Review of the Doctrine of a Vital Principle: As Maintained by Some Writers* (London: John and Arthur Arch, 1829), 34.

Dr. James Curry obtained his medical degree in Edinburgh in 1784 and became member of the College of Physicians as a Licentiate in 1801. An active supporter of the resuscitative process, he was involved in the Northampton chapter of the Royal Humane Society. In his *Popular Observations on Apparent Death from Drowning, Suffocation, &c. with An Account of the Means to be Employed for Recovery* (1792), Curry defined apparent death as the suspension of the body's animated functions, thereby equating suspended animation and apparent death. He went on to agree with Kite's assertion that the difference between apparent death and absolute death was the status of the vital principle.²⁸ Although he admitted that the length of time that a body could stay in the state of apparent death was as of yet undetermined, he did surmise that the vital principle was retained "so long as the vital organs continue of their natural warmth; and consequently it would appear, that within this period, the only circumstance which precludes the possibility of a recovery, is, such a degree of injury being done to the brain, heart, or lungs, as renders them incapable of having their proper functions again renewed."²⁹

Like the majority of this group of physicians, Anthony Fothergill was educated in Edinburgh, having graduated in 1763 before becoming a fellow to the Royal Society (1778) and a Royal College of Physicians Licentiate (1779). In his book, *Preservative Plan, or Hints or the Preservation of Persons Exposed to Those Accidents which Suddenly Suspend or Extinguish Vital Action, and by Which Many Valuable Lives are Prematurely Lost to the Community* (1798), A. Fothergill listed ways to revive people who were in the process of dying or had recently suffered a sudden or traumatic death. Although he was an avid supporter of the resuscitative

²⁸ James Curry, *Popular Observations on Apparent Death from Drowning, Suffocation, &c. with An Account of the Means to be Employed for Recovery* (London: Law and Son, 1792), B2.

²⁹ Curry, *Popular Observations on Apparent Death*, 3.

process, he also suggested other remedies that could be used to assist in the revival of someone who was dying from one of the aforementioned events. This helped transition the perception of the resuscitative process into the common methodologies used to revive people during the eighteenth century, rather than a catch-all remedy that could replace other methods.

A. Fothergill warned against the early determination of death when the signs of life first disappeared. He urged his readers to continue to wait until putrefaction presented, even after the initial tests for death yielded no signs of life. Rather than providing information about the stages in the transition from life to death, he focused on the stages of putrefaction, so that they could be easily recognized once the body was ready to be declared as absolutely dead. The most prominent symptoms of putrefaction that he noted consisted of clammy skin and the smell of decay that became more pungent over time.

Reviewing the signs of death provided by William Tossack (1746), the *New Universal English Dictionary* (1756), *Encyclopedia Britannica* (1771), Alexander Johnson (1785), Charles Kite (1788), and James Curry (1792), there were 11 individual symptoms of death that were provided, prior to the ultimate provable sign of putrefaction. The following chart represents the prevalence of these signs throughout the given eighteenth century scholarship. cursory research showed that the most prevalent signs and symptoms of death were the cessation of automatic functions, no detectable pulse, no detectable respiration, and the separation of the soul from the body.

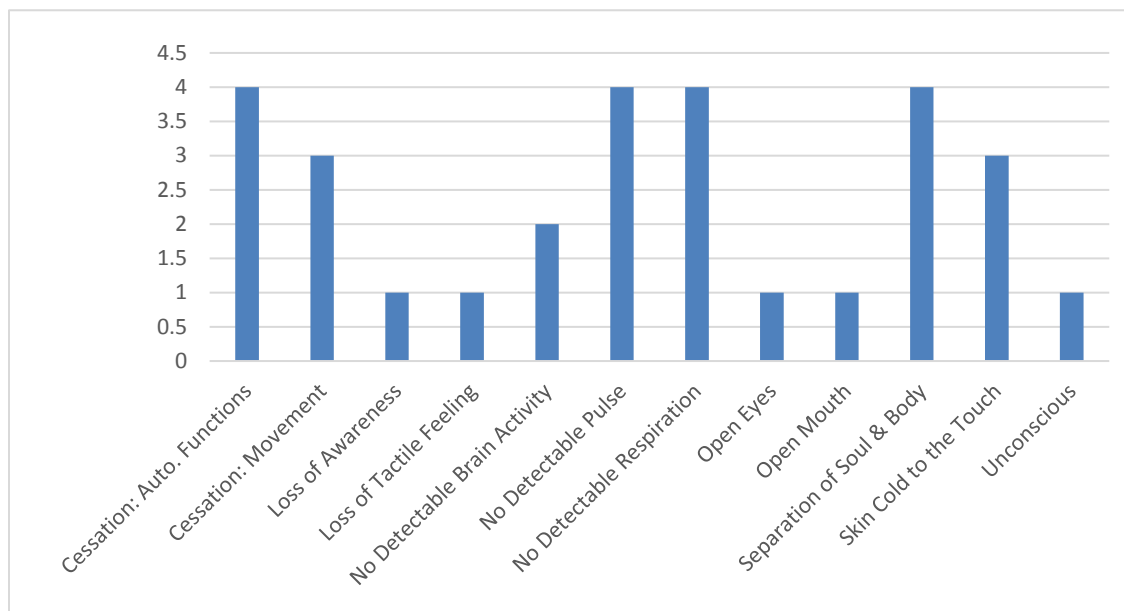


Figure 3: Reported Signs of Death During the Eighteenth Century

The quest for a comprehensive definition and identification of the signs of death continued into the nineteenth century. The most notable research of the time was done by the British physicians Dr. Walter Whiter, who focused on the medical aspects of death, and James Cowland Prichard, who focused on the evolving concept of the soul. In 1819, Whiter presented his *Dissertation on the Disorder of Death*, which built upon the work of the previously mentioned physicians. He believed that death in-and-of-itself was a disorder against the natural process of life. He defined it as “a derangement of the System, disturbing its healthy state, in

various degrees of force, from the slightest change to the condition of Death.³⁰ Whiter was respectful of the physicians who had worked on identifying the signs, symptoms, and stages of death, and those who had worked to create a more inclusive definition of death during the eighteenth century. However, he didn't appreciate the amount of work that had been done in identifying the process of dying and making that information available to the public. Instead, he apologized to his readers about the limited progress that had been completed in understanding the transition from life to death. Whiter's dissertation brought together the scholarship of many of the physicians who had sought to identify a more comprehensive definition of death and obtain a better understanding of the transition from life to death. His dissertation attempted to describe the complex and often contradictory state of the study of death at the time. As a result, his theories were often contradictory with those that had been developed during the eighteenth century, and sometimes contradicted his own theories.

Building on the theories of Alexander Johnson, Whiter explained that while death was a disorder, it had a point where it transitioned in to an "incurable state."³¹ Once the body entered into this state, the type of remedy applied to it, up to and including the resuscitative process, would no longer revive the person. Rather than agreeing that apparent death was the stage where life had seemed to cease, as theorized in the preceding century, he believed that apparent death was the point at which the derangement of the healthy body began. He noted the signs of death were "the absence of apparent motion and sensation," with the caveat that the body had

³⁰ Walter Whiter, *A Dissertation on the Disorder of Death; Or that State of the Frame Under the Signs of Death called Suspended Animation; to Which Remedies Have Been Sometimes Successfully Applied, as in other Disorders, In Which it is Recommended, that the Same Remedies of Resuscitative Process Should be Applied to cases of NATURAL DEATH, As They are to Cases of Violent Death, Drowning, &c. Under the Same Hope of Sometimes Succeeding in the Attempt* (Norwich, 1819), 378.

³¹ Whiter, *A Dissertation on the Disorder of Death*, 16.

also entered into a state of putrefaction.³² Conversely, he urged his readers to attempt to revive the apparently dead – via the resuscitative process or otherwise - in “all cases of Death, under all circumstances, and upon all occasions.”³³ In this way, it appears that had had encouraged his audience to attempt to revive all of those who were showing signs of apparent death, but to understand that if the person could not be revived it was because revival was not always possible.

He also hypothesized about what factors could be strong enough to cause the cessation of the vital principle. Whiter agreed with the theory of Scottish physician, William Cullens, that people died from fevers because poison lurked within them. It was further theorized that this poison could have been the initial cause of the fever or “it may be a Putrid matter generated in the course of the Fever.”³⁴ It was understood that vital principle did not follow the laws of physics or chemistry, and if the person remained in a state of apparent death without decaying, the vital principle was still active. Therefore, it was identified that the power of this substance within fevers primarily affected the nervous system and caused the fluids within the body to decay. Once decay had set in, it was hypothesized that the vital principle would cease.

As identified in the story of Cawthorn and, later, in the *Encyclopaedia Britannica*, theories of religion and medicine were inter-related during the eighteenth century. Therefore, academic physicians of the time needed to incorporate religious beliefs into the definition of death for it to be considered medically viable. James Prichard continued the work of Kite and Whiter when he wrote his *Review of the Doctrine of a Vital Principle* (1829). He explained that

³² Whiter, *A Dissertation on the Disorder of Death*, 17.

³³ Whiter, *A Dissertation on the Disorder of Death*, 41.

³⁴ Whiter, *A Dissertation on the Disorder of Death*, 401.

historically the vital principle had been viewed as “a real entity, a sort of in-dwelling guardian of the body.”³⁵ However, Prichard’s theory of the vital principle extended beyond the metaphysical and into the physiological, transitioning it away from the traditional concept that it referred to the soul, essence of life, alertness, and/or the personality. Rather, he theorized that the vital principle was the same as the electric fluid, which had been discovered during the preceding century, and was believed to run between the nerves of the body, carrying their impulses from one to the next.

During the early-mid eighteenth century, theories regarding the soul were evolving. Questions regarding what the soul was and how it interacted with the body started to advance. Several scholars affiliated with the Church of England continued to follow the writings of the 2nd century scholar, Tertullian, believing that “the soul was material.”³⁶ However, this once strongly held belief was in the midst of debate, which hinged on providing proof of said material. In response, scholars began to point out the impossibility of proving the material or mortality of the soul.³⁷ In 1737, Jean-Baptiste de Boyer published his *La Philosophie du bon sens*, which delineated the differences between animal and human spirits. He postulated that animals possessed materially sensitive souls, which were “found in the blood,” and the human soul was rational and resided in the heart or the brain.³⁸ This rationality allowed it to separate from the body and return to the universe when or after the body died.

The concept of Christian moralism began during the Renaissance and indicated that the soul was immortal and slept in the dead body until Judgement Day, at which time it would be

³⁵ Prichard, *A Review of the Doctrine of a Vital Principle*, 17.

³⁶ Ann Thomson, *Bodies of Thought: Science, Religion, and the Soul in the Early Enlightenment* (London: Oxford University Press, 2008), 167.

³⁷ Thomson, *Bodies of Thought*, 167.

³⁸ Thomson, *Bodies of Thought*, 167.

absorbed back into the universe.³⁹ “The most common form of seventeenth-century Christian moralism claimed that the whole individual died and was insensible until the resurrection and judgement, when the whole individual would be resuscitated and enter on eternal life.”⁴⁰ This stood in direct contrast with the Anglican view that “the soul would go to heaven or hell immediately on death.”⁴¹ Searching for scientific answers to religious mysteries denoted a clear detachment from the blind faith in Christian doctrine and was indicative of the scientific reasoning that termed the eighteenth century ‘the Enlightenment.’ Historian Julie Rugg explained that people were afraid to have their bodies exhumed for use in medical studies because they believed that once the corpse had been dismembered, it would hinder the body from reuniting with the soul during the Reckoning.

While the medical community researched the transition from life to death and worked to properly define it, the public’s awareness of premature repercussions due to misdiagnosed death increased. British newspapers published hundreds of articles which mentioned that people were ‘apparently dead’ or ‘had the appearance of death’ and the repercussions that befell them. From waking during the watching period to being found dead inside their coffin or tomb, the British public were able to read about premature burials as they occurred throughout western Europe and America. An article published in the *Ipswich Journal* in 1749 reported about concerns of people dying suddenly in Rome, Italy, and their apprehensions that “some of those people might be buried alive.”⁴²

³⁹ Thomson, *Bodies of Thought*, 42.

This theory was confirmed by the Lateran Council (1513).

⁴⁰ Thomson, *Bodies of Thought*, 42.

⁴¹ Thomson, *Bodies of Thought*, 42.

⁴² “I. Italy,” *Ipswich Journal* (Suffolk, England), April 15, 1749, n.p. Held by the British Newspaper Archive.

In addition, the British press published articles regarding the lengths that people went to in order to in order to prevent premature repercussions. This was exemplified in several articles that were published throughout the eighteenth century. In 1733, it was reported that the lawyer John Frohock had died in Suffolk. The article reported that he “always had a terrible Apprehension of being buried alive.”⁴³ In order to assuage his fears, he placed the following orders into his will:

“the Lid of the Coffin in which he is to be put, shall be made with Hinges to open easily; and that four Persons be appointed continually to attend his corpse, not only before ‘tis buried, but for Eight Days after Interment in his Vault; in which Time if he should happen to come to Life, he intends to rap against the Coffin-Lid, and his Attendants are in such case to furnish their proper Assistance.”⁴⁴

An article in the *Newcastle Chronicle* in July 1768, took a macabre turn when a woman bequeathed £50 to her surgeon “on the condition that he cuts her throat as soon as she has been dead twelve hours.”⁴⁵ The author of this snippet article left no question as to why the woman left that sum of money to her surgeon by including the statement that “the fear of being buried alive has occasioned this legacy.”⁴⁶ A similar story was reported in 1791 edition of the *Derby Mercury* where it was reported that Lady Dryden pre-paid a surgeon “to cut her throat, before the interment [*sic*] of her corpse; which operation, we understand, has been duly performed agreeably to her ladyship’s desire.”⁴⁷ These stories indicated that people were afraid of being misdiagnosed as dead and suffering premature repercussions because they were actually in a

⁴³ “London,” *Derby Mercury* (Derbyshire, England), May 3, 1733, n.p. Held by the British Newspaper Archive.

⁴⁴ “London,” n.p.

⁴⁵ “London, July 23,” *Newcastle Chronicle* (Northumberland, England), July 30, 1768, n.p. Held by the British Newspaper Archive.

⁴⁶ “London, July 23,” n.p.

⁴⁷ “To the Printer,” *Derby Mercury* (Derbyshire, England), June 16, 1791, n.p. Held by the British Newspaper Archive.

state of apparent death. It also indicates the level of fear that they had over the prospect of being buried alive. In the earliest case presented, John Frohock was approximately 60 years ahead of his time because he furnished the precursor to the safety coffin. Rather than being nailed into his coffin, he wanted it to have hinges so that if he awoke after being enclosed in the coffin, but prior to burial, his attendants would be able to easily open the coffin. The latter cases indicated that it was preferable to have a medical professional perform an action that would decisively kill them, over taking the chance that they would not come out of a state of apparent death prior to their burial.

Chapter 4: The Royal Humane Society

“and he, who was dead, sat up; and began to speak”¹

Luke, Ch. VII, Verse 15

The initial Society for the Recovery of Persons Apparently Dead, was instituted in Amsterdam, Holland. Although the Amsterdam society was short lived, only running from 1767 – 1771, the seeds had been planted for research to advance in the area of the revival of persons who had stopped breathing, specifically due to suffocation from humidity in the mines, strangulation, choking, stifling, etc.² In his pamphlet, *A Short Account of a Society at Amsterdam* (1773), Alexander Johnson used the fact that the resuscitative process had been previously written on and used in England to support its continued usage. He also postulated that “persons have been committed to the grave, in whom the principles of life might have been revived,” in cases where the resuscitative process had not been used.³

Johnson reported that the resuscitative process that was used in Amsterdam consisted of blowing tobacco smoke through the intestines by way of either “a tobacco pipe, a pair of bellows, or the sheath of a knife,” as soon as possible.⁴ After the body was internally fumigated with tobacco, it was considered a best practice for the body to be kept warm and dry to counter the cold and stiff symptoms of drowning. In addition to warm blankets, and the aid of bed-warming pans, friction heat made by rubbing the hands over the spine, back, and neck was

¹ Robert Pool Finch, *A Sermon, Preached at Christ Church Middlesex, for the Benefit of the Humane Society* (London: John Nichols, 1788), 1.

² Alexander Johnson, “A Short Account of a Society at Amsterdam,” in *The Monthly Review, or Literary Journal From June 1773 to January 1774*, ed. Several Hands, (London, 1774), 309.

³ Johnson, *The Monthly Review*, 309.

⁴ Johnson, *The Monthly Review*, 310.

The bellows used were smaller than those used to keep fires ablaze.

suggested. People were made to sneeze in order to help draw air in and through the body. Once signs of life were perceived, the person could be given strong spirits like wine or brandy, mixed with stimulants like salt in order to help revive them further. This revival was likely due to the pungent taste of highly salted liquor. In addition, the taste may have helped the victim cough up some of the excess water that may have remained in their lungs or stomach. Tossack's method of resuscitation was also included in the instructions. Specifically, the method was described as "closing off their nose with one hand, and pressing over the left breast with the other," while blowing air into the mouth in order "to inflate the lungs."⁵ These methods were preferred over the methods that had previously been popular, such as: "rolling them upon a barrel, suspending them by ropes under the arms and legs, etc."⁶

After the closing of the Society for the Recovery of Persons Apparently Dead in Amsterdam, several similar societies were instituted throughout western Europe, including in Italy, Germany, France, and England. In England, William Hawes and the and the members of the 'Institution for Affording Immediate Relief to Persons Apparently Dead from Drowning,' which was later renamed the Humane Society and then the Royal Humane Society (RHS) in 1787, worked to continue the advancement of the resuscitative process. These physicians, and the many who followed, furthered the clinical and practical research of the resuscitative process, eventually renaming it 'cardiopulmonary resuscitation' (CPR). In order to encourage others to utilize the process, the Royal Humane Society enacted a reward system which awarded two guineas for those who attempted to use the resuscitative process, but had unsuccessful results,

⁵ Johnson, *The Monthly Review*, 311.

⁶ Johnson, *The Monthly Review*, 311.

and awarded four guineas when the resuscitative process was used successfully.⁷ From its inception to the present, “the Royal Humane Society committee has reviewed over 88,000 cases and made well over 200,000 awards.”⁸

In 1773, “123 people were reported to have drowned in London alone. Many of them probably worked on the Thames or on one of London’s smaller rivers, canals or lakes.”⁹

Prior to the acceptance of the resuscitative process there were several other remedies used to try to save the lives of those who had drowned. It was not yet understood that only a small amount of water was inhaled or ingested by those who had drowned. Therefore, the goal of the remedies enacted upon the effected person was to cause them to dispel the water inside of them.

One such remedy placed the body in a supine position over a barrel and rolling it to squish the liquid out. Others consisted of “rolling, tumbling, or holding [the body] upside down to clear it of water.”¹⁰ The use of the feather part of a quill was thrust down the effected person’s throat to “endeavour to make him vomit.”¹¹ Over time, the medical community in England started to set aside remedies for expelling water, which negatively impacted the body, and began to focus on remedies that caused the body to continue to function.

⁷ William Hawes, *An Address to the King and Parliament of Great Britain on Preserving the Lives of the Inhabitants* (London: J. Dodsey, 1783), 6.

The guinea was worth approximately £1.05. Therefore, the relative conversion of 18th century guineas to modern dollars is as follows: 2 guineas = ~\$310.00; 4 guineas = ~\$620.00
 Converter used: Eric W. Nye, “Pounds Sterling to Dollars: Historical Conversion of Currency”, accessed Tuesday, August 28, 2018, <http://www.uwo.edu/numimage/currency.htm>.

⁸ “Royal Humane Society: About Us,” Royal Humane Society, accessed August 31, 2018, <https://www.royalhumane.org.uk/about-us>.

⁹ “The History of the Society,” Royal Humane Society, accessed June 22, 2018, <https://www.royalhumane.org.uk>.

¹⁰ Alexander Johnson, *An Address for Extending the Benefits of a Practice for Recovery from Accidental Death* (London, 1775), 9.

¹¹ “London Magazine. Means to Recover Persons Thought to be Drowned,” *The Scots Magazine*, (Midlothian, Scotland), September 1745, 424.

Doctors of the time knew that people were being prematurely buried, and they felt that their fears of premature burial were confirmed by the necessity of the Society for the Recovery of Persons Apparently Dead in Amsterdam. In 1793, Reverend Samuel Glasse delivered the sermon at the annual proceedings for Royal Humane Society. During his sermon, he stated that the resuscitative process was perceived as being responsible for “the removal of the morbid affections of the system, [and] equally active and happy in accomplishing triumphs over the grave.”¹² Those involved in the Royal Humane Society of London understood that in order to obtain the maximum effect, it was imperative to teach laymen to accept, learn, and utilize the process. As we now know, their efforts were successful because, over two centuries later, the process continues to be taught and utilized throughout the world.



Figure 4: After Resuscitation by W. Haws and J.C. Lettsom from Near Drowning¹³

¹² Samuel Glasse, *Dr. Glasse's Sermon, in Favour of The Humane Society, March 17, 1793* (London: John Nichols, 1793), 20.

¹³ Robert Smirke, *A Man Recuperating in Bed at a Receiving-House of the Royal Humane Society, After Resuscitation by W. Haws and J.C. Lettsom From Near Drowning*, Watercolour, Wellcome Collection, London, England, <https://wellcomecollection.org/works/t6dgcgvzq>.

The following steps for the resuscitative process were taken from the *Proceedings of the Society for the Recovery of the Apparently Drowned* (1774):

First the medical professional was advised to handle the body carefully. The annual proceedings directly stated that the body should not be “shaken violently, nor roughly handled, nor carried over anyone’s shoulder so that head hanging downwards nor rolled upon the ground, or over a barrel, nor lifted up by the head, except with the greatest caution.”¹⁴ Rather, “the unfortunate object should be cautiously conveyed by two or more persons or in a carriage upon straw, lying as on a bed with the head a little raised, and kept in as natural and easy a position as possible.”¹⁵ It is interesting to note that in the latter quote, the body is considered an ‘object,’ ostensibly because it had entered into an apparently dead state. Therefore, until tests for death were applied it was unknown if the body was in a state of suspended animation or dead.

The next step was to raise the body temperature slowly, with the use of a nearby fire, hot water bottles, warming pans, and warm baths. It was suggested that the temperature of the water bottles, pans, baths be just above that of a normally healthy person. However, it is important to note that the identification of what is modernly considered a normal body temperature was not discovered until the nineteenth century.¹⁶ During this time, the goal of raising the body temperature was to stimulate the animal function of body temperature up to what was perceived as healthy.

¹⁴ F. Bull, *Annual Proceedings of the Society for the Recovery of the Apparently Drowned* (London, 1774), n.p.

¹⁵ Bull, *Annual Proceedings*, n.p.

¹⁶ This will be explored further in Chapter 5

Then the respiratory part of the resuscitative process would be employed. In order to do this, the medical professional would close the patients nose with one hand. Next, the patient's mouth would be blown into, at which time a second person would start performing chest compressions on the body. At that time, a small bellow would be used to administer an enema of tobacco smoke. Simultaneously, a third assistant would rub a stimulant on the victim's temples. Since brain death was understood to have existed, it is feasible that the stimulant was used to try to keep the blood flowing in the brain in order to keep it working.

Finally, the patient was to be bled as soon as they returned to life. Bleeding would have the effect of both lowering the body temperature slightly, as well as calming the patient. At that point, the patients' throat and nose would be tickled, in order to make them sneeze or cough in order to make certain that their lungs could both expand and contract. Next, the patient's ability to swallow would be tested by administering increasing increments of liquid, starting with a teaspoon. If the patient remained unresponsive, the medical professional was instructed to use small bellows in order to blow into the bowels or lungs, for a short time.

In order to achieve the best results, it was expected that the entire process would take over two hours to complete. However, reports of the resuscitative process being practiced for 30 - 45 minutes were common. These times conflict greatly with the modern understanding of death due to lack of oxygen and the usage of CPR. Modernly, it is accepted that "injury will usually set in after a lack of blood flow to the brain for around three to four minutes," and that the longer that the brain goes without oxygen, the more severe the brain damage will be.¹⁷

¹⁷ "Types of Brain Disorders: Anoxic & Hypoxic Brain Injury," Synapse, 2018, accessed November 25, 2018, <http://synapse.org.au/information-services/anoxic-hypoxic-brain-injury.aspx>.

Irreversible brain damage begins after 4 - 10 minutes without oxygen.¹⁸ Performing resuscitation after the 10 minute mark allows for an increased likelihood of the patient suffering from memory, coordination, or movement disorders. After 10 - 15 minutes without oxygen, the patient can fall into a persistent coma.¹⁹ Despite these generalizations, it is important to keep in mind that hypothermic conditions can lengthen the survival time to up to 45 minutes after submersion. This is because the cold temperature causes the body's metabolism to slow down, which in turn decreases the amount of oxygen that the body needs to perform its essential functions decreases.

During the eighteenth century, doctors did not regularly have or record follow-up appointments with their patients. Likewise, they did not tend to record names in their medical notes, preferring to use the patient's job or closest male relation. Therefore, aside from a smattering of cases throughout the eighteenth century, there are few records that indicate the long-term effects of the resuscitative process. This includes the long-term effects of procedures such as enemas and bleeding in addition to the respiratory and compression techniques, over the course of 30 minutes - 2 hours. The few cases that do exist indicate that the process was a success and that patients continued to live for the vague term of 'years' afterwards and were in perfect health.

Unfortunately, these reports do not hold up to validity tests of modern medicine. It is suggested that CPR be continued for up to 60 minutes (in children) or until the "victim starts to show signs of regaining consciousness, such as coughing, opening his or her eyes, speaking, or

¹⁸ Alexis A. Topjian, et al., "Brain Resuscitation in the Drowning Victim," *Neurocrit Care* 17 (2012): 441-467, <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3677166>.

¹⁹ Topjian, "Brain Resuscitation."

moving purposefully AND starts to breathe normally.”²⁰ A study done in 2015 analyzed the findings of CPR that had been performed on 160 children who had drowned and presented with hypothermia between 1993-2012. Of the 98 children who received resuscitation for over 30 minutes, 87 “died and 11 survived but with severe neurological impairment.”²¹ Conversely, the children who received resuscitation for under 30 minutes survived with “normal to moderate disability status.”²² The authors explained that the children were more likely to survive the event if it occurred in water temperatures of 0° – 46.4°F, and they were submersed for less than 30 minutes. These findings are child specific because a connection in survival rates and cold water drowning has not been discovered for adults. Despite the findings of this small study, the authors admitted that they “still have no clear idea about the absolute limits of survival.”²³

Despite the fact that the modern findings differ with those from the eighteenth century, it is important to keep in mind that there has been a considerable amount of research done to advance the resuscitative process and understand the short and long term effects on the body after the process has been employed. The findings reported from the eighteenth century represent the beginning of the process, and it should be expected that they would differ from studies done in the modern age. Not only has medical theory advanced, but medical technology has as well. In the simplest terms, one needs only to understand that the stethoscope was invented in 1816, when it was little more than a tube that was put on the patient’s chest and in held up to the doctor’s ear. The device that is commonly seen around the neck of modern

²⁰ Anthony J. Handley, “Drowning,” *British Medical Journal* 348 (2014), accessed November 29, 2018, <https://doi.org/10.1136/bmj.g1734>.

²¹ Ian Maconochie, et al., “Resuscitating Drowned Children,” *British Medical Journal* 350, no. 104 (2015), accessed November 29, 2018, DOI: 10.1136/bmj.h535.

²² Maconochie, “Resuscitating.”

²³ Maconochie, “Resuscitating.”

medical practitioners was developed during the 1960s. In addition, the iron lung, which revolutionized medicine by allowing for artificial respiration was invented in 1927. Analysis and theories from the eighteenth and early nineteenth centuries were being created even as the medical profession was in the early and intermediate states of studying human anatomy and physiology. Therefore, modern statistics and understanding have been presented as a point of contrast, not as an attempt to downplay or negate the progress made during the eighteenth century.

Chapter 5: The Public's Response Amidst Growing Concerns

*“Burning, drowning, even the most hideous mutilation ...
is nothing as compared with burial alive.”¹*

As it became known that the apparently dead were being improperly diagnosed as actually dead and were being closed within their coffin, buried or interred, or even dissected, people outside of the medical community began to respond as well. Two different public responses arose from the concerns of being prematurely diagnosed as dead. The first was an acceptance that this problem was occurring and an interest in taking part in the solution. The second was a dismissal of the growing concerns of premature diagnosis and the subsequent repercussions, claiming that they were alarmist in nature.

In some cases, apparent death was the actual diagnosis which indicated that the body was going to be watched and/or prepared prior to burial. The British press printed articles relating to violent assaults, murders, and mining accidents, often using the term ‘apparently dead’ as a way to describe the state of the victims. The casual usage of this term indicates that it was a society-wide accepted stage which transitioned the body from living to dead, or visa versa. An article in the *Staffordshire Advertiser* did this when it reported on the death of a sixty year old woman who worked in a workhouse. The article reported that she “was suddenly struck with apparent death, and was ordered to be buried on the Sunday following.”² According to the source, the woman was put into the coffin and put in the “place where the dead are kept till buried.”³ When the

¹ William Tebb, *Premature Burial and How it May be Prevented* (London: Swan Sonnanschein & Co., 1905), 13. Originally reported in the newspaper *The Spectator* on September 14, 1895. The complete quote is: “Burning, drowning, even the most hideous mutilation under a railway train, is as nothing compared with burial alive.”

² “Singular Case,” *Staffordshire Advertiser* (Staffordshire, England), June 23, 1798, n.p. Held by the British Newspaper Archive.

³ “Singular Case.”

workhouse physician viewed the body, he noticed that she did not exhibit the proper signs of death in order to be buried, and he delayed the burial. Nearly a week later, she “rose up in her coffin,” and survived the ordeal.⁴ Multiple reports were published in books and newspapers about people who were apparently dead, for whom the burial process had begun – or even concluded – by the time they either woke up on their own (revived) or awoke with the aid of the resuscitative process (resuscitated).

There was a finite amount of time – approximately six hours – in which a person could be rescued after being shut into their coffin. After that, the enclosed person would asphyxiate on their own carbon dioxide. There is evidence that the British public during the eighteenth century took these concerns seriously. Articles were published in the British press relating to people who had come back to life during their wake or in their coffin. Pamphlets which detailed the steps of the resuscitative process were handed out to parishes and at receiving houses, so that the average person could learn how to use the method. As the Royal Humane Society was working to distribute the instructions for the process to parishes throughout London and its suburbs, greater and lesser nobility, such as the Duke of Northumberland, the Duke of Queensbury, and Lord Valencia, put their support behind further advancement of the method. However, one of the most poignant signs of the public’s fear of being prematurely buried can be derived from the creation of the safety coffin.

Safety coffins were coffins that included a way to signal those above ground, just in case the person buried was still alive. Prior to his death in 1792, the Duke of Brunswick was so worried about being buried alive that he ordered the creation of an elaborate safety coffin. His

⁴ “Singular Case.”

coffin included a way to deliver food and a pipe to deliver fresh air. Unfortunately, science of the time had not advanced to the point of understanding how air travels. Even if the Duke had been enclosed in his coffin and/or buried alive, he would have run out of breathable air in approximately six hours despite the use of the tube. Likewise, the Dr. Rev. Robert Robinson was so afraid of being prematurely buried that he planned for “a glass window to be placed in his coffin over his face, in order that any signs of life exhibited after burial might be detected.”⁵ For many years after his death in 1791 crowds would visit his grave, but after a time their “morbid curiosity” became such an annoyance that his grave was filled.⁶ By the end of the eighteenth century, the concept of the safety coffin had spread to other countries in Europe. In 1798, the German priest P.G. Pessler “suggested that every time a coffin was buried in a churchyard, a hollow tube should be connected to it,” with a rope connecting the apparently dead person to the church bells.⁷ The theory was that as the person who had been prematurely buried moved within their coffin, they would shake the cord and ring the church bells, thus alerting people that they were still alive. Unfortunately, the idea was better in theory than in reality. The reality of such a plan would fall apart at the basic step of deciding the type of cord that could be used that would be small enough to fit in the coffin, sensitive enough to be shaken with enough force that the vibration would travel a considerable distance, and strong enough to ring the church bell.

More safety coffins were developed during the nineteenth century. The most common structure that tends to come to mind mimics Pessler’s idea. These safety coffins have a string that was attached, to the corpses’ wrist or ankle and was encased in a tube that connected to a

⁵ James Cocks, *Memorials of Hatherlow and of the old Chadkirk Chapel* (Stockport: Claye and Sons, 1895), 187.

⁶ Cocks, *Memorials of Hatherlow*, 187.

⁷ Jan Bondeson, *Buried Alive: The Terrifying History of Our Most Primal Fear* (London: W. W. Norton & Company, 2001), 119.

bell on the other end. If a person was buried alive, they would shake the string and it would alert people that the person had been prematurely buried. Often people envision the string as coming out of the grave and being supported by a shepherd's crook. However, that construction is unrealistic because the weight of the compacted dirt would not allow a string to gain enough motion to ring a bell. The patent which looks the most similar to the description as given was Dr. Johann Taberger's 1829 patent.

The Central Cemetery Museum in Vienna, Austria has a safety coffin bell from this era. Rather than a string, there is a metal cord that would attach to the foot of the corpse and then to a bell resembling a fire bell which was incased in a wooden box. If the person within the coffin kicked their feet, the cord would move, and the bell would clang, thereby alerting the graveyard watchmen that the person inside was still alive. Unfortunately, this design had a fatal flaw: the body moves as it decomposes. Therefore, it has been widely accepted that there were instances where the decomposing dead were exhumed.

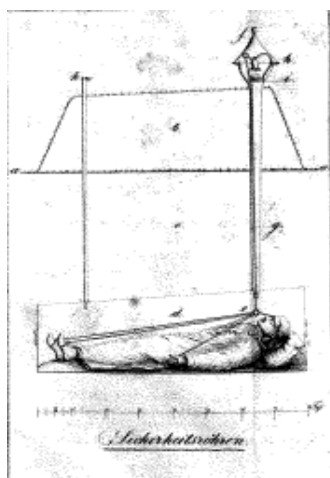


Figure 5: 'Design for Safety Coffin,' by Dr. Johan Taberger⁸

⁸ Richard H. Underwood, "Notes from the Underground (Sometimes Aboveground, Too)," *Savannah Law Review* 3, no. 1 (2016): 166.

Johan Taberger, 'Design for Safety Coffin,' in *Der Scheintod*, (Hanover, 1829).

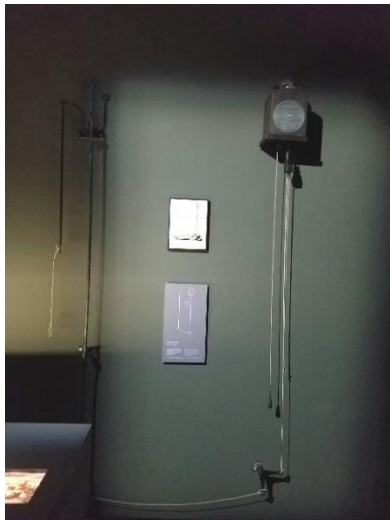


Figure 6: Safety Coffin Alarm at Central Cemetery Museum, (Vienna, Austria)⁹

As early as the 1820s, coffins began to be made out of iron. Glass panels were put into the top of the coffin, allowing the living to watch the apparently dead for signs of life or definitive signs of death. Although iron coffins were expensive, they had the benefit of being able to house ice in a compartment below the chamber that held the body. This allowed for slightly longer preservation of the body especially during the warmer months.

One particular safety coffin that is worth noting is the Eisenbrandt Life Preserving Coffin. The Eisenbrandt Life Preserving Coffin was produced in 1844 and allowed for a person who was prematurely enclosed into their coffin to free themselves without assistance, as long as they revived prior to burial. This coffin had a small springboard inside that would be compressed when the body's shoulders lay on top. It also had a thin rod of metal that was screwed horizontally to the interior of the coffin and was positioned over the body's torso. This rod was affixed to the latch. If the rod opened the latch, a thin piece of curved metal, which was

⁹ Nicole Salomone, *Picture of Safety Coffin Alarm at Central Cemetery Museum (Vienna, Austria)*, 2018.

affixed to the inside top rim of the coffin would allow for the lid to pop up or swing open. As the body moved forward, the springboard would decompress, pushing the body out of the coffin. The company described the coffin as superior to the others on the market, and said that “the *slightest* motion of its inmate will be instantly communicated to the springs, which freeing the coffin-lid, it flies open – a circumstance which entirely relieves the confinements of the body, and thus removes all uneasiness of premature interment from the minds of anxious friends and relatives.”¹⁰ The premise behind the Life Preserving Coffin was a good one. However, if the body was moving because the coffin had been jostled or because the body had started to decompose, the sensitivity of the design would result in corpses popping out of coffins.

During the beginning of the nineteenth century, a split occurred in the way premature repercussions were considered academically. In his often contradictory dissertation regarding the disorder of death, Whiter explained that unnamed ‘alarmists’ were interested in “delaying Interment, till Putrefaction the supposed sign of absolute Death appears.”¹¹ Whiter used the word ‘alarmist’ to mean people who were overly concerned about cases of premature burial. He admitted that the veracity of those concerns was not without reason, natural, and probable. However, despite his understanding that premature burial was a true concern, his argument seems to rely on semantics. He argued that rather than adding to the body of knowledge regarding apparent death, alarmists raised the concerns of others from fear to terror.¹² He

¹⁰ Serba Smith, “The Life Preserving Coffin,” *The Columbian Magazine*, January 1844, 36.

¹¹ Walter Whiter, *A Dissertation on the Disorder of Death; Or that State of the Frame Under the Signs of Death called Suspended Animation; to Which Remedies Have Been Sometimes Successfully Applied, as in other Disorders, In Which it is Recommended, that the Same Remedies of Resuscitative Process Should be Applied to cases of NATURAL DEATH, As They are to Cases of Violent Death, Drowning, &c. Under the Same Hope of Sometimes Succeeding in the Attempt* (Norwich, 1819), 57.

¹² Whiter, *A Dissertation on the Disorder of Death*, 63.

disagreed with their perspective that recovery from apparent death was cause for concern, and believed that their need to wait until the apparently dead person had putrefied revealed that they preferred that the person did not recover. He considered these to be “perverted conceptions” because the alarmists were focused on the death rather than the revival of the individual.¹³ In this way, his perspective was limited, as he seemed to view each revival as a singular case rather than an indication that others may have been buried or interred prior to their revival. It is as though he was agreeing that people were being prematurely buried, but accusing those concerned about such instances of overreacting.

This division of perspective was exemplified by the contrasting perspectives of William Tebb and David Walsh at the turn of the 19th – 20th century. Both men were respected physicians who approached the concept of premature burial from two different angles. Tebb believed that premature burial was a problem and sought to educate the public about the issue with his *Premature Burial and How it May be Prevented*. Co-authored, with Colonel Edward Vollum, the first edition was published in 1896 and drew both supporters and critics. One such critic was David Walsh, who believed that Tebb and Vollum’s fears were alarmist.

The resurgence of the societal and academic interest regarding the treatment of the corpse was not without reason. However, society’s relationship with death evolved during the nineteenth century; by the end of the century, people no longer thought about death on a daily basis. Improved sanitation in London caused people to live longer, and the growth of industry allowed people to improve their quality of life. This, in turn, permitted people to consider more than their day to day survival. During the 1890s, people began to concern themselves with “how

¹³ Whiter, *A Dissertation on the Disorder of Death*, 65.

dead bodies should be treated and, more fundamentally, about ensuring that the dead truly were dead.”¹⁴ This led to a moral panic, which George K. Behlmer described as the “popular overreaction to a perceived threat.”¹⁵ Despite the historical longevity of the fears of premature burial, this moral panic came after several other sensationalized and society-wide panics that loomed within the public memory, such as “poisoning (1855-56), wrongful confinement in lunatic asylums (1858-59 and 1876-77), garotting (1862)”, and physicians issuing death certificates before signs of death were observed (1893-94).¹⁶ The press, who had casually written about people being misdiagnosed as dead and subsequent premature repercussions during the eighteenth century, were now using sensationalist titles to draw people into the panic relating to the unverified issuance of death certificates. The publication of Tebb’s book occurred at the crux of this fervor, during the same year that 11,464 unverified deceased were buried in England.¹⁷

William Tebb was a social reformer who had spent his life protecting those who could not protect themselves. Over the course of his lifetime, he advocated for the abolition of slavery, women’s rights, and the kinder treatment of animals. Towards the end of his career, he turned his interest towards what he considered to be the ultimate underserved population: the corpse. Considering the corpse the ultimate victim, he worked to raise awareness regarding diseases that masqueraded as death, continued to develop the definition of death, as set forward by Kite and Whiter, and expanded their research to include signs of false death, which was considered to be the next step between apparent death and actual death. False death, or death counterfeit, was

¹⁴ George K. Behlmer, “Grave Doubts: Victorian Medicine, Moral Panic, and the Signs of Death,” *Journal of British Studies* 42, no. 2 (2003): 207.

¹⁵ Behlmer, “Grave Doubts,” 225.

¹⁶ Behlmer, “Grave Doubts,” 226.

¹⁷ Behlmer, “Grave Doubts,” 228.

apparent death which passed the tests for death, but the person was still alive. He also included stories, mostly drawn out of newspapers and journals, regarding people who had been prematurely buried or nearly prematurely buried, throughout Europe, due to the improper diagnosis of death. One such story that was included in his book was that of his co-author Colonel Edward Vollum.

Vollum was a doctor who worked as a medical inspector for the United States Army and had served during the Civil War. During the course of his life, he had been diagnosed as dead after an extended bout of suspended animation due to drowning. As his body was being prepared for interment, he regained consciousness. This experience piqued Vollum's curiosity about how a person could be misdiagnosed as dead. After his experience, he wrote prolifically to both the American and British press where "he strongly deprecated the custom of hastily judging by appearances, maintaining that putrefactive decomposition was the only sure proof of death."¹⁸

The public and academic awareness of this issue reached a crossroads in 1896 when William Tebb and Edward Vollum instituted the London Association for the Prevention of Premature Burial (LAPPB). The purpose of the LAPPB was to devise better ways to prevent premature burial and to disseminate information regarding the cause and tips to prevent future cases. In an 1899 letter to the editor of 'The Metaphysical Magazine for the Library,' the LAPPB was discussed by a James R. Williamson. The letter explained that premature burials continued to occur because the attending doctors were not obligated to verify the disease or provide a death certificate of the person who had apparently died.¹⁹ While the letter mentioned

¹⁸ Tebb, *Premature Burial*, 18.

¹⁹ Jas. R. Williamson, "Premature Burial," in *The Metaphysical Magazine: Volume IX* (New York: The Metaphysical Publishing Company, 1899), 319.

David Walsh's criticisms of Tebb's book, it also listed seven other publications regarding incidences of premature burial; three of which were written by doctors and three were written by a Fellow of the Royal Society. The letter went on to explain that a law would be going before Parliament soon, with the intent of directing physicians to verify that a person showed signs of death prior to furnishing a death certificate. This letter helped to exemplify that even at the end of the nineteenth century, there were still issues relating to the confirmation of an accurate diagnosis of death.

Mirroring the theories of Charles Kite in the preceding century, Tebb described that the difference between apparent death and real death was the existence of the "presence of a force or power continually opposed to the action of physical and chemical laws."²⁰ He explained that the presence of such a force indicated that the person was in a state of apparent death, and the absence of the presence indicated that the person's death was absolute. Tebb indicated that the primary signs of death were an absence of heartbeat, respiration, blood circulation, and nervous response. He also wrote about the occurrence of rigor mortis, but warned that it was not a reliable sign of death. Like the physicians of the eighteenth century, he believed that the only true sign of death was putrefaction.

David Walsh was a Scottish physician with a special interest in skin diseases. In part, his publications focused on skin wounds, male baldness, sexually transmitted diseases, and the deep tissue damage that occurred from the use of x-rays. His research was well respected in the medical community and he was appointed as a physician at the Western Skin Hospital of London. Despite his understanding of medicine during the Victorian era, he was a strong critic

²⁰ Tebb, *Premature Burial*, 277-278.

of William Tebb, and wrote his own book, *Premature Burial: Fact or Fiction* (1897), in response to Tebb's *Premature Burial and How it May be Prevented* (1896). In contrast to Tebb's decidedly historical and informational perspective on premature burial in western Europe, Walsh's book removed the historical context from the concern and put it solely into the context of nineteenth century medicine and society. Walsh asserted that

it may be at once stated that the whole theory of premature burial is unsupported by a single scientifically proved instance; that the likelihood of such an occurrence is extremely small; that the balance of probabilities weighs all in the other direction; in short that the whole of this popular belief is nothing more than a legend.²¹

Despite Walsh's statement that scientific proof regarding premature burial did not exist, George K. Behlmer's wholistic position on that perspective was that "the British medical establishment held that not one authenticated case of premature burial had been unearthed in a generation."²² The 'generation' part of this statement is important because it insinuates that Walsh may have been skeptical due to instances of people being misdiagnosed as dead falling out of social memory. This would also explain why Walsh was not alone in his skepticism of the topic. In fact, Tebb, himself, stated that "the great majority of the medical profession in this country [England] are either skeptical [*sic*] or apathetic as to the alleged danger of living burial."²³

Despite the Walsh's knowledge of Victorian medicine, his claims made it clear that he neglected to consider how much British society and medicine had evolved between the time of Whiter (1819), the inception of the Anatomy Acts of 1832, and the late Victorian era, wherein these debates of validity were taking place. The medical standards that Walsh was accustomed

²¹ David Walsh, *Premature Burial: Fact or Fiction* (London: Bailliere, Tindall and Cox, 1897), 5.

²² Behlmer, "Grave Doubts," 225.

²³ Tebb, *Premature Burial*, 8.

to were vastly advanced from those of the eighteenth century. Scientific developments that took place during the nineteenth century included “new knowledge in histology, pathology, and microbiology”, the neuromuscular system, and significant research was done on anesthesia and surgical sterilization.²⁴ New scientific instruments that were developed during the nineteenth century included the ophthalmoscope, higher-magnified microscopes, and the x-ray.

Walsh’s lack of historical context relating to the practice of medicine was exemplified when he discussed the probability of confusing a sleep disorder with death. It was his opinion that the “trained and careful observer,” would notice that the body was still warm and the person was still breathing.²⁵ Such a simple statement does not take into account that not everyone who verified death in the preceding century was trained to do so. Therefore, they would not have the baseline understanding of physiology that was expected during the late nineteenth century. Apart from the previously mentioned advances in medical theory, the understanding of physiology advanced as well. The common understanding of the physiology of body temperature was developed during the 1860s when Carl Wunderlich analyzed the body temperature of 25,000 people and noticed that the average body temperature was 37°C.²⁶ Since this information was not scientifically analyzed in the preceding century, it was unrealistic of Walsh to assume that those who declared the death of others in the preceding century would have the same observational awareness as he was afforded due to his Victorian-era education.

Beyond Walsh’s ignorance of the history of medicine, he also was unaware of the evolution of laws pertaining to medicine. He had stated that that the laws of England [in 1897]

²⁴ Jan Marsh, “Health & Medicine in the 19th Century,” Victoria and Albert Museum, 2016, accessed August 9, 2018, <http://www.vam.ac.uk/content/articles/h/health-and-medicine-in-the-19th-century>.

²⁵ Walsh, *Premature Burial*, 6.

²⁶ Greg Kelly, “A Review of the History of Body Temperature and its Variability Due to Site Selection, Biological Rhythms, Fitness, and Aging,” *Alternative Medicine Review* 11, no. 4 (2006): 279.

mandated that the corpse must be kept above ground for 4 – 7 days, and that he doubted that a body could lay out that long without someone noticing a sign of life, especially circulation or respiration. Walsh made no indication that he knew that the waiting period of up to a week did not exist in or before the early nineteenth century. Whiter had discussed this in 1819, explaining that any delay in the burial process tended to be either at the behest of the family or accidental in nature. In short, the medical and legislative advancements of the nineteenth century completely changed the field of medicine, ushering in a new era, much like the anatomical work of Vesalius had in the late sixteenth century.

Chapter 6: The Prevalence of Premature Repercussions

“The custom of hastily laying out the persons supposed to be dead, and rashly interring the same, has been opposed, by men of learning and philanthropy, in this and other countries.”¹

During the late eighteenth century and early nineteenth century, several educated men of Europe theorized on the number of people who were being accidentally prematurely buried. In his 1793 sermon in favor of the Royal Humane Society, Dr. Samuel Glasse presented two hypotheses which set the range of people who had been prematurely buried between 10% - 50%. Both of his sources, ironically, came from France: Baron de Hupch (naturalist) and Francois Thieurey (Doctor Regent of the Faculty of Paris, France). Glasse reported de Hupch’s hypothesizes that “of one hundred persons apparently dead, and precipitately interred, ten of them at least may be restored to life, their friends, and their country.”² Thieurey’s reported hypothesis was considerably higher, putting the number of people who were misdiagnosed as dead and prematurely buried at 1/3 – 1/2 of the whole.³ In the following century, the British mathematician, John Snart included the statement that “one in ten” (10%) people were being prematurely buried in England in his impassioned plea to Parliament on the subject.⁴ In 2001, Dr. Jan Bondeson stated that “a thorough review of the literature on apparent death and premature burial would rather support the opposing view of ... Walsh, and other skeptics.”⁵ Bondeson believed that the statistics on premature burial as reported throughout the nineteenth

¹ Samuel Glasse, *Dr. Glasse’s Sermon, in Favour of The Humane Society, March 17, 1793* (London: John Nichols, 1793), 22.

² Glasse, *Dr. Glasse’s Sermon*, 24.

³ Glasse, *Dr. Glasse’s Sermon*, 24.

⁴ John Snart, *Thesaurus of Horror; Or, the Charnel House Explored* (London: Sherwood, Neely, and Jones, 1817), 175.

⁵ Jan Bondeson, *Buried Alive: The Terrifying History of Our Most Primal Fear* (London: W. W. Norton, 2001), 240.

and early twentieth centuries, which generally spanned from <1% - 10% throughout western Europe and America were “highly exaggerated.”⁶ However, until this study, modern statistics relating to the prevalence of premature repercussions in contrast to the historical theories have been absent from the scholarship.

Laws and tradition regulating the exhumation of bodies have not typically allowed for a large-scale cemetery exhumation, and certainly not for academic pursuits in discovering the prevalence of premature burial during the eighteenth century. Interestingly, the Museum of London Archeology (MOLA) has undertaken the exhumation, preservation, and/or relocation of several cemeteries in and around London. These cemeteries date from as far back as the pre-Roman era and as late as 1852. Their findings are kept within the Osteological Database, which is housed by the Centre for Human Bioarchaeology and the Museum of London. The database includes historical context “describing the general nature of burials at various point in the city’s history,” descriptions of the cemeteries and “individual excavation sites,” and “downloadable data and photographs describing individual skeletons from [the] different cemetery sites.”⁷

Despite the comprehensive data contained within the Osteological Database, it does not include information regarding the placement of the bones. There is no indication if the bones were found arranged in a way that was atypical of burial practices from the time. This is likely because post-putrefaction, “the decomposition process continues through liquefaction and disintegration, leaving skeletonized remains articulated by ligaments.”⁸ This means that even if a person had struggled within their coffin during the eighteenth century, unless that coffin was

⁶ Bondeson, *Buried Alive*, 240.

⁷ “About the Wellcome Osteological Research Database,” Museum of London, 2018, accessed November 18, 2018, <https://www.museumoflondon.org.uk/collections/other-collection-databases-and-libraries/centre-human-bioarchaeology>.

⁸ B.B. Dent, “Review of Human Decomposition Processes in Soil,” *Environmental Geology* 45 (2004), 577.

airtight, a modern exhumation could reveal disjointed bones rather than a twisted figure.

Because of this, evidence of misdiagnosed death and any subsequent premature repercussions – for the time being – has to be taken from literary evidence such as books and newspapers from the eighteenth century. By surveying these sorts of primary and secondary sources from the eighteenth, nineteenth and early twentieth centuries, that were published in Britain, 155 cases of misdiagnosed death were identified. The vast majority of the sources used to obtain this information were primary sources from the eighteenth century: books (9), newspapers (22), and pamphlets (3). Of the remaining sources two were books from the nineteenth century, and one was a book from the twentieth century (Tebb, 1905).

Like the hypotheses reported by Glasse and Snart, the cases surveyed did not necessarily occur in Britain, but they were published in British sources and presented to the British public.⁹ Cases of people who had been declared apparently dead and what premature repercussions followed, if any, were analyzed. The amount of cases reported increased over the course of the century, with the most cases being reported between 1791-1800. The victims in these cases were not necessarily diagnosed by medical professionals, but were considered to be dead or in a state of apparent death, by those who attended to them. Burials could mean having been placed in the grave, placed in a tomb or mausoleum, or enclosed in the coffin waiting to be buried. Finally, it is important to note that there are only a few cases that included follow up information. Most reports were single-situational, reflecting what the reporter observed or heard about during one interaction with the victim.

⁹ A list of these sources can be found in the Appendix.

The following information was collected from each case, as applicable: name, gender, age, year, premature repercussion (enclosed, buried, entombed, dissected); if the person died in the grave after being buried alive (exhumed), was brought out of the grave alive (resurrected), brought back to life with the resuscitative process (resuscitated), or transitioned back to life on their own prior to being buried (revived). Although not all of this information could be collected from each case, they were all analyzed in order to provide the most relevant preliminary information for this study. That being said, gray areas were met with caution and if a case did not indicate that a certain repercussion or revival occurred, it was assumed that it had not. The exception to this relates to the year in which a case of apparent death took place. If the exact year was not given, but the case included that it happened a variable number of years prior, either that number of years was subtracted from the book's publication date, or if only the description identifying the number of years between the case and the book's publication was not given, the publication date of the source was used.

The base findings indicated that of the 155 cases of apparent death 101 were male, 50 were female, and 4 were unspecified. These numbers have also been delineated by age range, specifically 'adult,' 'child,' and 'infant.' Despite the understanding that children as young as eight were permitted to work during the eighteenth century, the parameters for these designations are based off of more modern standards: 0 months – 1 year old is an infant, 1 year – 17 years of age is a child, and 18+ years of age is an adult.

	Infant	Child	Adult	Unspecified
Male	2	26	71	2
Female	0	12	37	1
Unspecified	2	1	1	0
Total	4	39	109	3

Figure 7: Age Ranges of Those Diagnosed as Apparently Dead (155 Cases)

In addition, although the cases were reported in British sources, they occurred throughout western Europe and America. American cases were included because of its connection with Britain during the eighteenth century. The 155 cases were reported as originating in the following countries: England (95), France (15), Scotland (9), Germany/Prussia (10), Unspecified (8), Ireland (7), America (2), Italy (2), Spain (2), Austria (1), Holland (1), Sweden (1), and Wales (1). It is supposed that a higher prevalence of these cases were reported as having occurred in England either because the author was British or to make the subject more relatable to a British audience.

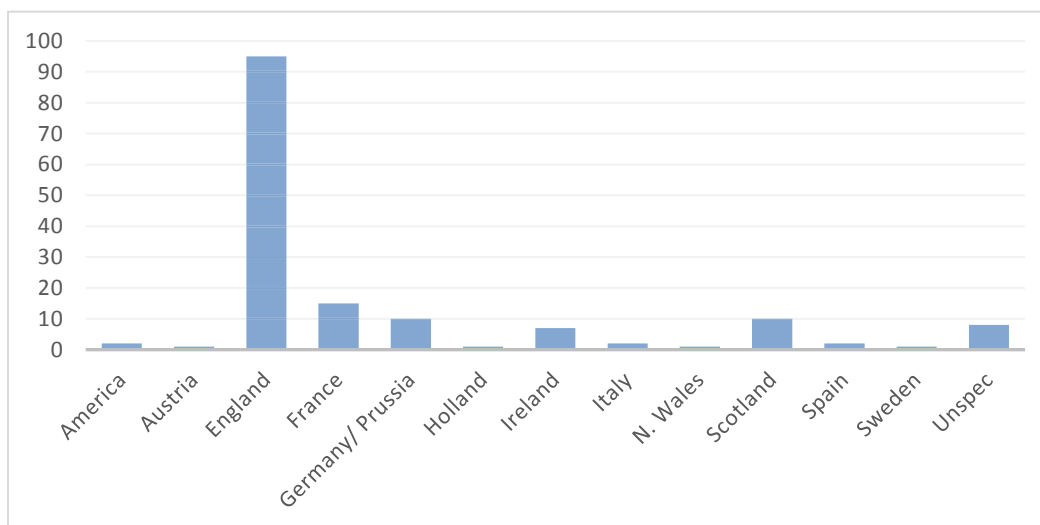


Figure 8: Country of Origin for Cases Reported in British Sources

Typically, after a person had received a diagnosis of being apparently dead, they went through the burial process. Throughout the cases reviewed, four premature repercussions were noticed. People either awoke after being enclosed into their coffin, ostensibly after their wake had ended, but prior to the burial of said coffin. Others regained their consciousness after they had been prematurely buried, prematurely interred, or prematurely dissected. After reviewing the 155 cases, the inclusive results differed from those that had specifically occurred in England.

The inclusive results of my study revealed that 21, or 13.5%, of people who were misdiagnosed as dead suffered one of the aforementioned premature repercussions. Those 21 people were prematurely enclosed in their coffin (3), buried in their grave (14), interred in their tomb (2), or prematurely dissected (2). Once they had encountered their premature repercussion, the end results were as follows: all 3 of the people who were enclosed in their coffin survived; 10 (71.4%) of those prematurely buried died either in or shortly after being taken out of the grave; 1 (50%) of those prematurely interred died, and 1 (50%) of the people prematurely dissected died. All total, of the 21 people who incurred a premature repercussion 12 of them (57.1%) of them died as a result.

Outcome	Enclosed (3)	Buried (14)	Interred (2)	Dissected (2)
Survived	3	4	1	1
Died	0	10	1	1

Figure 9: Breakdown of Premature Repercussions by Type

As is evidenced in Figure 8, 95 of the collected cases (61.2%) were reported as having occurred in England. The gender delineation was 66 males, 28 females, and 1 unspecified. Of the 95 cases of misdiagnosed death that occurred in England, 4 people (4.2%) were prematurely

enclosed (2) or buried (2). The two people who were prematurely enclosed in their coffins survived, but the two people who were prematurely buried died.

When this preliminary data regarding premature repercussions is compared against the hypotheses on the amount of people who were prematurely buried, as supplied by Glasse (10% - 50% in western Europe), and by Snart (10% in England), it is important to keep in mind that 155 cases of a premature death diagnosis is a small sample size. In addition, although cases of premature enclosure, burial, interment, and dissection were all included in literature about premature burial, the cases that were reviewed by de Hupch, Thieurey, and Snart were not given in the reporting sources. That being said, the findings that 13.5% of western Europeans who incurred a premature repercussion due to being misdiagnosed as dead appear to favor de Hupch's 10% hypothesis as reported in Glasse. The 33.3% - 50% as reported by Thieurey in Glasse's sermon appears to exaggerate the number of premature repercussion cases. Regarding Snart's assertion that 10% of people being diagnosed as dead in England were prematurely buried, the findings of this study indicate that less than half that amount (4.2%) actually incurred a premature repercussion. Therefore, it is possible that – like the rest of the impassioned style in which he wrote – Snart's hypothesis was more alarmist than scientifically based. Further study regarding the misdiagnosis of death and subsequent repercussions in western European countries will be necessary to produce more cohesive statistics on the prevalence of premature repercussions during the British Enlightenment.

Conclusion

It has been generally accepted that the misdiagnosis of death caused people to be prematurely buried during the eighteenth century. However, the relationship between the public's awareness of the issue and the medical community's response to further identify the signs and symptoms of death has not previously been explored. Issues regarding the misdiagnoses of death and incidents of premature repercussions had been recorded since antiquity. Serendipitously, the interest in properly identifying the signs of death was renewed during the mid-eighteenth century, just as medical theory had advanced to the point where answers could be discovered. Previously accepted medical advancements, such as dissecting humans to study human anatomy and physiology and the acceptance of William Tossack's resuscitative method formed the foundation of the medical community's ability to respond.

People were diagnosed as apparently dead because the understanding of anatomy and physiology were still being developed. As of 1771, the definition of death was still as basic as the body not being alive and having separated from the soul. Although the latter was eminently difficult to prove, the former was in the process of being developed during the eighteenth century. Physicians such as Drs. John Fothergill, Alexander Johnson, Charles Kite, James Curry, and Anthony Fothergill worked to develop a more comprehensive definition of death, and the definition progressed alongside the evolving understanding of anatomy and physiology. The most common signs that they identified were the cessation of automatic functions, the cessation of respiration and a heartbeat, and the departure of the soul from the body.

Simultaneously, there was an increased interest in the study of medicine in London. Medical professionals and students were required to get their own cadavers in order to further

their anatomical studies. Unfortunately, the number of bodies which could be legally obtained were far dwarfed by the number of bodies that were needed. Therefore, medical professionals turned to resurrectionists, who exhumed freshly buried bodies, in order to fill in the gap.

By the 1760s, the resuscitative process had become so popular that medical societies were being opened throughout western Europe enhance its usage. It had become a widely accepted test for death, which also had the ability to revive the patient on which it was being performed. Compounding the importance of developing a comprehensive definition of death were ethical issues relating to people being misdiagnosed as dead and any subsequent repercussions that could have been incurred as a result. These repercussions included people being enclosed in their coffins, being prematurely buried/interred, or being prematurely dissected. Evidence of these repercussions exist in the form of state papers, Parliamentary reports, newspapers, and literature.

Even as the medical community was advancing its understanding of anatomy and physiology to answer questions about life and death, the British public were also responding to reports of people being misdiagnosed as dead and suffering a premature repercussion. While some people contended that concerns regarding being prematurely buried was alarmist, others noticed the importance of traditions such as watching the dead for signs of life during the wake. Likewise, coffins were developed that would alert those on the outside if the person on the inside had been prematurely enclosed or buried.

Early hypotheses regarding the prevalence of premature burial were reported in British sources in 1793 and 1817. In 1793, it was hypothesized that between 10% - 50% of those who were diagnosed as dead and then buried throughout western Europe were still alive. In 1817, it

was hypothesized that 10% of English people who were diagnosed as dead and subsequently buried were still alive.

One hundred and fifty-five (155) cases of apparent death, which had occurred in western Europe and America (1700 – 1799) and were reported by British sources, were collected and analyzed for this thesis. Of the collected cases, 21 (or 13.5%) had resulted in premature repercussions. It also showed that of the 95 cases that occurred in England, 4 (4.2%) of them were either enclosed within their coffin or prematurely buried. In comparison to the hypotheses from 1793 and 1817, the assertion of 10% of people throughout western Europe aligns best with the cases analyzed for this thesis.

The inclusion of these new statistics relating to the prevalence of premature repercussions during the eighteenth century opens up several new avenues of study relating to social, economic, and medical history in England. Future historians will have the ability expand and compare the number of cases of apparent death and premature repercussions that were recorded from this and other eras.

The Museum of London Archeology (MOLA) is presently working with the HS2, Ltd. Company to exhume the St. James Garden Cemetery in order to create a new Underground line. This project has approved the exhumation of the ~61,000 people who were buried in St. James Gardens between 1790-1853, with the intent to rebury them elsewhere. If this initial case study is on par with the results of the larger sample, the corpse value range increases from 2,562 (4.2%) to 8,235 (13.5%). The projected timeline for this project is to start in the 2018-2019 fiscal year and complete in 2033-2034.

With the understanding that not everyone in the St. James Garden Cemetery was buried within a coffin, those who were could provide some insight on the number of people who were prematurely buried. The larger sample size would allow for a more accurate modern representation of the number of premature repercussions, specifically those of being prematurely enclosed in the coffin and prematurely buried. The location of this excavation is of particular interest because St. James Gardens is located between the Royal College of Physicians and St. Pancras Hospital. During the late eighteenth through mid-nineteenth centuries, the physicians of the RCP were concerned with stopping the rate at which people were being misdiagnosed as dead and subsequently prematurely buried. Meanwhile, resurrectionists were taking bodies from nearby graves to sell to the medical professionals at the hospital.

The understanding of how bodies were buried during the eighteenth century will assist in identifying if any bodies are situated in atypical positions. Generally buried with their chin strapped closed, their arms across their chest, and in a shroud or winding sheet, it would be interesting to see if any in-grave skeletal remains were no longer laid out as they should have been. Since the Osteological Research Database focuses on the state of bones from excavations in and around London, it would be interesting to see if there are any injuries on the hands, arms, head, knees, or legs, which would be indicative of pressure fractures or force trauma from attempts of trying to escape the grave. Similarly, (depending how airtight the coffin is) the insides of coffins could be analyzed to see if there are any indentations, scratch marks, or dried blood remaining, which would indicate that its inhabitant had tried to escape.

Appendix

Chapter 2: Cadavers for Medical Schools

The follow artwork depicts resurrectionists at work:

William Austin, *A nightwatchman disturbs a body-snatcher who has dropped the stolen corpse he had been carrying in a hamper, while the anatomist, William Hunter (1718-1783), runs away*, 1773, Etching with engraving, Wellcome Collection, London, England.



Thomas Rowlandson, *Two men placing the shrouded corpse which they have just disinterred into a sack while Death, as a nightwatchman holding a lantern, grabs one of the grave-robbers from behind*, 1775, Coloured drawing, Wellcome Collection, London, England.

Chapter 6: Prevalence of Premature Repercussions

The 155 cases analyzed for premature repercussions came from the following sources:

Primary Sources

Newspapers

Accessed via the British Newspaper Archive, the British Library Board

Aberdeen Press

Bath Chronicle and Weekly Gazette

Bury and Norwich Post

Caledonian Mercury

Chelmsford Chronicle

Chester Chronicle

Country News

Cumberland Pacquet, and Ware's Whitehaven Advertiser

Derby Mercury

Hibernian Journal; or, Chronicle of Liberty

Hampshire Chronicle

Hereford Journal

[The] Ipswich Journal

Kentish Gazette

Leeds Intelligencer

Newcastle Courant

Norfolk Chronicle

Oxford Journal

Reading Mercury

Salisbury and Winchester Journal

Saunders's News-Letter

The Scots Magazine

Staffordshire Advertiser

Pamphlets and Books

Anonymous, *The Surprising Wonder of Doctor Watts, who lay in a trance three days* (1710)

Anonymous, *A Brief history of John Bubble and Thomas Greenman* (1735)

James Curry, *Observations on apparent death from drowning, suffocation, &c* (1792)

William Hawes, *An Address to the King and Parliament of Great Britain on Preserving the Lives of the Inhabitants* (1783), *An Address to the Public* (1779) & *Royal Humane Society...Annual Report* (1798, 1799)

Rowland Jackson, *A Physical Dissertation on Drowning* (1746)

Alexander Johnson, *A Collection of Authentic Cases proving the Practicability of Recovering Personal Visibly Dead by Drowning* (1775)

Andrew Nosely, et al., *A new prophesy: Or, An Account of a young Girl, not above Eight Years of Age Who being in a trance, or lay as dead for the Space of 48 Hours* (1780)

Pamphlets and Books, continued

Hugh Smythson, *The Compleate Family Physician* (1785)

Christian Struve, *A Practical Essay on the Art of Recovering Suspended Animation* (1802)

Joseph Taylor, *The Danger of Premature Interment Proved from Many Remarkable Instance of People who have Recovered After Being Laid Out for Dead* (1816)

Jean-Benigne Winslow, *The Uncertainty of the Signs of Death and the Danger of Precipitate Interment* (1746)

Secondary Sources

Books

James Blake Bailey, *The Diary of a Resurrectionist 1811-1812* (1896)

William Tebb, *Premature Burial and How it May be Prevented* (1905)

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