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The Grinning Wall: History, Exhibition, and Application of the Hyrtl Skull Collection at the Mutter Museum

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**The Grinning Wall:
History, Exhibition, and Applications of the
Hyrtl Skull Collection at the Mütter Museum**

by

S. Katherine Keckeisen

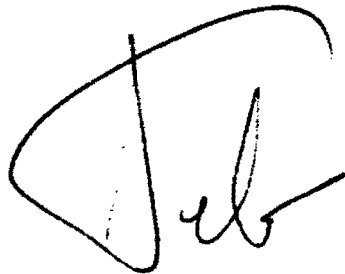
**A thesis submitted in partial fulfillment of the
requirements for the degree of**

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Approved by:

A handwritten signature in black ink, appearing to read 'Petra', with a large, sweeping initial 'P' and a stylized 't'.

**Dr. Petra ten-Doesschate Chu
Thesis Advisor**

Program Authorized to Offer Degree: MA Program in Museum Professions

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Abstract

The skull is the most recognizable part of the human skeletal system. It is a universally used cultural symbol for death, danger, or the fragility of life. Comprised of twenty individual bones, the human skull is one of the key markers of individuality. It is the skull that gives humans their unique shape and facial characteristics, which allow them to recognize each other.

In the 18th and 19th centuries, it became a habit to acquire human skulls from all over the world. Skulls were collected with the aim of “reading” their physical traits to ascertain race, intelligence, or character.

The Viennese Dr. Joseph Hyrtl acquired his collection of skulls because he wished to study the comparative differences in the human skull with the aim of establishing comparative anatomy as a major field of science, one which would allow humans to see the interconnectivity between all species, even amongst humans. His collection ended up in the Mütter Museum in Philadelphia, Pennsylvania, where all 139 skulls have remained on exhibit since their acquisition in 1874. In the 138 years since the skulls were acquired, the Mütter Museum has gone through significant changes, as their visitor base has shifted from medical students to the general public. The display of the collection, however, has not been adapted to these changes, nor has the Mütter addressed the ever-growing concerns of the public over the display of human remains and skeletal material. Only recently has the museum begun to implement public programs to educate the public about the skulls and their history. It has also begun projects that seek to update the display of the collection.

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Introduction

Tucked away on a side street in downtown Philadelphia sits an unassuming building. Dwarfed by the large skyscrapers that surround it, many pass it by without a glance. Yet inside this building are some of the most fascinating objects and collections in the United States. This is the College of Physicians of Philadelphia's Mütter Museum, a medical museum (one of the few left in existence) that collects and displays various preserved human specimens, from deformed fetuses to a nine-foot long colon, as well as medical tools and instruments used throughout history. While there are several objects for which the museum is well known, one of the most shocking and famous collections in the Mütter catches the visitor's eye immediately as she enters the museum: a large display case filled with skulls. This is the Hyrtl Skull Collection.

Since ancient times, the human skull has both fascinated and horrified those who look at it. With empty eye sockets and a perpetual grin, skulls seem to be mocking the living: they are a reminder of our own mortality and of the inescapable fact that death comes to all: *memento mori*. The human skull is common in visual culture across the world as a sign for death, danger, and the transience of life.

For scientists, the skull has, traditionally, been one of the most studied sets of bones in the human body especially in the study of human evolution.¹ More than human skeletons in general, they provide scientists with a wealth of information concerning the evolutionary changes that may take place among different

¹ Christine Quigley, *Skulls and Skeletons: Human Bone Collections and Accumulations* (Jefferson, NC: McFarland & Company, Inc., Publishers, 2001), 8.

populations around the world.² Skulls fascinate others outside the scientific and artistic communities because “the skull is man’s final claim to individuality.”³ The skull lends individuals their unique facial features, which can often be recreated from the skull after death to allow for identification.⁴

The collection that is the focus of this paper was once the property of Dr. Joseph Hyrtl, a respected Viennese anatomist whose injection-preserved anatomical specimens made him one of the most famous medical professionals of the mid-19th century.⁵ Hyrtl, like many of his colleagues, privately collected anatomical specimens and anatomical oddities both for study as well as to serve as a status symbol. An important part of his collection was an assortment of skulls. The skulls in Hyrtl’s collection came primarily from Central and Eastern Europe. For the most part they were skulls of suicides and executed criminals that were taken from their resting places by local men who were paid for their services by Hyrtl or his associates in the area. Towards the end of Hyrtl’s medical career, he began to sell off his various collections to museums around the world. His collection of 139 human skulls was purchased in 1874 by the Mütter Museum, where they remain on display to this day.

While the Hyrtl Skull Collection, as well as the rest of the objects housed and exhibited by the Mütter Museum, was once used strictly for medical education and

² David R. Hunt, “The Value of Human Remains for Research and Education,” in *Human Remains: Conservation, Retrieval and Analysis: proceedings from a conference held in Williamsburg, VA. Nov. 7-11th 1999*, edited by Emily Williams, 129-134. (Oxford: Archeopress, 2001), 130.

³ Tom Weil, *The Cemetery Book* (New York: Hippocrene Books, 1992), 272.

⁴ Not only have reconstructive techniques been used for identifying unknown murder victims, but they have also been used to give insight to what human predecessors (Neanderthals) might have looked like.

⁵ Colin Dickey, *Cranioklepty: Grave Robbing and the Search for Genius* (Cave Creek, AZ: Unbridled Books, 2009), 180.

study, the Mütter no longer serves as an institution for the education of medical professionals. Today it is a public museum and the vast majority of the Mütter's visitors come from outside the medical profession. The continued exhibition of skulls and other human remains in a public museum has raised legal and ethical questions. With the passage of the Native American Graves Protection and Repatriation Act (NAGPRA), many museums with human anatomical specimens have come under intense public scrutiny, even if their specimens are not of Native American origin. This scrutiny has focused both on the provenance of the specimens and on the appropriateness of their display. Today, museum professionals working in medical museums or museums with human remains constantly grapple with questions regarding the appropriateness of their collections. Did the individuals whose remains are on display (or their families) consent to their presence in the museums? Should human remains ever be exhibited? If the museum continues to exhibit them, in what situations is this appropriate? Should museums with human remains attempt to repatriate them to the families, or to the appropriate cultures, if they do not have complete provenance?

The purpose of this paper is to examine the history of the Hyrtl collection, as well as the place of the Mütter Museum in the history of medical education in the United States. The questions mentioned above will also be examined and discussed and I will argue that, because the skulls serve the specific mission of the Mütter as a medical museum, some of these questions are rendered moot. I will also discuss how the Mütter is still using the Hyrtl Skull Collection in new and innovative ways,

as well as propose some ways that the Mütter might attempt to update the exhibition to make it more educational to the public, which may not have knowledge of the human skull and its anatomical variations.

Skull Collections of the 18th Century

In the late 18th century, the human skull and the brain that it protected fascinated European scientists. Many believed that the skull could somehow give reliable information as to “the strength or weakness of the [deceased’s] general character,”⁶ and none believed this more fervently than Franz Joseph Gall, who first studied the differences in the skulls of average human beings and those who could be called ‘geniuses.’ Gall called this study ‘cranioscopy’ and it was predicated on the idea that a genius would have a skull that was larger and different from those of ordinary people because it housed a larger brain, indicative of “a higher capacity for intelligence.”⁷ This brain also had characteristic folds that imprinted themselves on the inside of the skull when the bone was still pliable in infancy and Gall believed that one trained in cranioscopy could know all about the brain from these imprints in the skull that once housed it.⁸ While the imprints and specific characteristics of the brain would determine individual traits, Gall stressed the importance of skull size to measure intelligence:

There is an important difference between three sorts of skulls: the skulls of idiots; the skulls of those humans who are mediocre; and the skulls of those

⁶ Johann Caspar Lavater, *Physiognomy: or the corresponding analogy between the conformation of the features, and the ruling passions of the mind*, trans. Samuel Shaw (Oxford: H.D. Symonds, 1826), 85.

⁷ Dickey, *Cranioklepty*, 26.

⁸ *Ibid.*

outstanding humans who are great geniuses. The former ones are characterized by their small size, the latter ones are characterized by their magnitude.⁹

With the publication of his theories, Gall created what is, perhaps, one of the most notorious pseudo-sciences of the nineteenth century: phrenology.¹⁰

Nowadays, it is understood that Gall's theory was simply the result of conjecture, induction, and weak connections between outward behavior and the skull's physical traits. Or, as more eloquently stated by F. Gonzalez-Cruisi, "the case does not foretell the jewel, or the stone, inside. [Whether] crowned heads or heads plebian: once reduced to their bare osseous essentials the distinction matters little."¹¹

Gall began to lecture about his theories to the Viennese public in 1796. His theory of phrenology became an instant hit and many scientists set off to follow in Gall's footsteps. In his life-long search to ascertain just what characteristics separated the average human from the great genius, Gall amassed, not one, but two enormous collections of "skulls, casts of heads, and casts of brains,"¹² the majority of which were labeled as 'radical exemplars' with "103 [being] famous men, 69 criminals and 67 mental patients."¹³

As Gall's theories of phrenology began to be more and more accepted, several European, and even some American, scientists began to assemble their own

⁹ Franz Joseph Gall and Johann Caspar Spurzheim, *Dispositions intellectuelles et morales de l'homme et des animaux, par la configuration de leurs têtes*, vol. 2 (Paris: Schoell & Nicolle, 1812), 20, quoted in Michael Hagner, "Skulls Brains, and Memorial Culture," *Science in Context* 16, no. 1 (2003): 199.

¹⁰ Dickey, *Cranioklepty*, 26. Colloquially called "bump-reading" due to the fact that Gall also believed that the outer, physical characteristics of the skull could also tell about a subject's personality.

¹¹ F. Gonzalez-Cruisi, *Suspended Animation: Six Essays on the Preservation of Bodily Parts* (San Diego: Harcourt Brace and Co., 1995), 39-40.

¹² Michael Hagner, "Skulls Brains, and Memorial Culture," *Science in Context* 16, no. 1 (2003): 200.

¹³ Erwin H. Ackerknecht and Henri Vallois, *Franz Joseph Gall, Inventor of Phrenology and His Collection* (Madison: University of Wisconsin Medical School Press, 1956), 41.

collections of skulls and head casts. Obtaining the skulls was a potentially tricky endeavor. Due to the cultural taboos and laws of the time, human skulls were hard to come by. If a collector wanted the skull of a genius, that acquisition was harder still. The most likely way in which a collector would legally come by the skull of a person of “above-average” intelligence would be through a gentleman’s agreement with another physician or collector that, when he died, his skull (or brain) would go to his colleague. More often than not, however, a collector would have to resort to less-than-legal means of acquiring pieces for their collections: a resurrectionist, or grave robber, would be hired to unearth the desired skull from its grave. Gall and his followers never saw this as being disrespectful to the deceased geniuses. On the contrary, they saw it as “reverence by way of defilement.”¹⁴ By collecting and studying the skulls of great men, they were searching for the physical traits of genius.¹⁵

While many fell under the spell of Gall’s theories, there were many others who did not subscribe to his teachings. One of these was a fellow Viennese anatomist named Joseph Hyrtl. Like Gall, the human skull fascinated Hyrtl but, as a devout Catholic, Hyrtl did not subscribe to the phrenologists’ idea that the human brain was subject to changes that could be seen in the measurements of the skull. Hyrtl saw comparative anatomy, not phrenology, as the path to knowing God’s true plan through science.

¹⁴ Dickey, *Cranioklepty*, 55.

¹⁵ *Ibid.*

The Collection of Dr. Joseph Hyrtl

Joseph Hyrtl was born at Eisenstadt, Hungary in 1811.¹⁶ After completing his boarding school studies, he went to Vienna to take up the study of medicine. It was there that Hyrtl found his calling in comparative anatomy, or the examination and study of “the differences which characterise [sic] the same organ or the same series of organs in each class, family, genus, or species.”¹⁷ While Hyrtl was interested in the similarities and differences amongst different species, his main focus was the comparative differences within the human population.

In order to more accurately study these similarities and differences, Hyrtl began to amass several collections of different anatomical specimens,¹⁸ one of which would become one of the “most elaborate collections of anatomical specimens and preparations in the world.”¹⁹ In addition to the skull collection that is the focus of this thesis, Hyrtl had a large collection of “corrosive” anatomy specimens (prepared by Hyrtl himself) that became world-renowned,²⁰ especially after several of the finest had been exhibited at the World’s Fair in Vienna in 1873.²¹ Corrosive anatomical preparation is a process by which a tissue or capillary structure is preserved. A fixative, such as wax, is injected into the blood vessels of the structure

¹⁶ “Prof. Hyrtl’s Jubilee” in *St. Louis Courier of Medicine* ed. E.M. Nelson, Ph.D. (St. Louis: Jas. H. Chambers and Co., 1885), 523.

¹⁷ Auguste Chauveau, *The Comparative Anatomy of the Domesticated Animals*, trans. George Fleming (New York: D. Appleton and Co., 1800), 1.

¹⁸ Hyrtl was also well-known for his collection of otological preserved specimens of the human ear and hearing mechanisms.

¹⁹ Dickey, *Cranioklepty*, 180.

²⁰ So much so that many of the major museums of the time had Hyrtl anatomical preparations in their collections. (Ibid.)

²¹ “Medicine at the World’s Fair in Vienna,” *The Medical Press and Circular* 67 (1873): 207.

to be preserved, after which the “surrounding tissues are corroded away” allowing the desired specimen to be seen and studied.²² While corrosive specimen preparation had been used as far back as the 17th century, Hyrtl became “the modern master” of the craft,²³ displaying his adeptness by preserving some of the most delicate blood vessels in the human body through the process.

Hyrtl’s road was not an easy one: at the time he was accruing his collections and lecturing on anatomy at the University of Prague, the government did not take kindly to the study of comparative anatomy and its theories because those in power feared that it contradicted the doctrine of Roman Catholicism, the state religion.²⁴ Although he felt pressure from the state to be less outgoing in his championing of comparative anatomy, Hyrtl continued to lecture, both at university and in public forums. He even went so far as to found a public museum for comparative anatomy at the University of Vienna, where he had taken up a lecturer’s chair after leaving Prague. The museum contained several of his personal preparations.²⁵

Although Hyrtl was best known for his corrosive specimens, one of his most-prized collections was that of 140²⁶ human crania that he had diligently collected from all over Eastern Europe and parts of Western Asia. Local doctors and anatomists of Hyrtl’s acquaintance, who exchanged the crania for Hyrtl’s injected

²² Ibid, 179.

²³ Byron Robinson, “Corrosion Anatomy,” *Denver Medical Times* 16, no. 1 (1906): 441.

²⁴ Marilyn J. Kemper, “Whatever Happened to Joseph Hyrtl?” (PhD dissertation, Temple University, 1970), 11.

²⁵ “Hyrtl, Joseph” in *Americanized Encyclopaedia britannica: rev. and amended, vol. 10* (Chicago: Belford-Clarke and co., 1890), 6609.

²⁶ This number changes over time and with different accounts. While the Mütter Museum’s 1884 catalogue mentions 139 skulls, only 137 are in the museum now with no account for the missing two skulls.

specimens, procured the vast majority of these skulls.²⁷ Hyrtl often emphasized the difficulties in procuring such a large collection, stating:

It is easier to get the skulls of Islanders of the Pacific, than those of Moslim [sic], Jews, and all the semi-savage tribes of the Balkan and Karpathan valleys. Risking his life, the grave stealer must be largely bribed. My pupils, who are the physicians to the Turkish Pachas, procured most of them for me.²⁸

With each skull came some basic information on the individuals that once inhabited these skeletal housings: "the name of the person, the birthplace, age, religion, occupation, and in most cases the cause of death."²⁹

Many of the skulls that were acquired for Hyrtl's collection belonged to executed criminals, suicides, or paupers. All of these were populations sought out by grave robbers due to their lack of familial connections. According to Ruth Richardson, paupers' graves "were probably the easiest and most preferred source of dead bodies for dissection, after the gallows."³⁰ From the detailed information that accompanied each skull in Hyrtl's collection, however, it may be inferred that most of the skulls he possessed had not been robbed from graves but were given to him by anatomists who had paid off the officials at the institutions the deceased had last inhabited (prison, hospital, etc.). By obtaining the bodies before burial, they had also obtained specific information about the deceased. Indeed it was well known that "to gain [the corpse of executed criminals], they [the anatomists/surgeons] (often corruptly) obtained the apparent support of the panoply of law from

²⁷ Joseph Hyrtl, letter to T.H. Bache, (no date). Collection file, Mütter Museum, Philadelphia, PA.

²⁸ Ibid, October 29, 1973.

²⁹ Ella N. Wade, "Letters from Professor Hyrtl Found in a Mütter Museum Scrapbook," *Transactions and Studies of the College of Physicians of Philadelphia*, 22, no. 3 (1944): 116.

³⁰ Ruth Richardson, *Death, Dissection and the Destitute* (Chicago: University of Chicago Press, 2001), 61.

executioner and others involved in public executions"³¹ who would make sure that the corpse of the condemned made it to the anatomist's table and not to the grave. Suicides were also easy targets for the body snatchers because, at the time, suicides were not allowed to be buried in a Christian graveyard and often, family members were too ashamed to bury the body themselves in unconsecrated ground.

Hyrtl, besides writing this information down in his notes once a skull was obtained, would neatly transcribe it onto one of the temporal bones of the skull in ink.³² For the purposes of his ongoing studies in comparative anatomy, Hyrtl also noted (when applicable) any physical anomalies in the skull; for example, the skull of 24 year-old Croat, Drajo Paul (1006.077), shows a "persistent frontal suture."³³ By the last half of the 1800s, Hyrtl's collection of crania contained a wide variety of skulls from different people and places. Ages ranged from 8 to 80; cause of death included "trauma or disease (61), suicide (16), execution (11), or unknown (50)"; and 14 of the skulls belonged to women.³⁴ Besides skulls belonging to Eastern Europeans and West Asians, Hyrtl had also come into possession of a mummified cranium from Thebes.³⁵ Hyrtl also had in his possession the skull of Wolfgang Amadeus Mozart. The skull, which had changed hands several times since being exhumed from Mozart's pauper's grave in 1793, had been given to Hyrtl's brother, Jakob. When Jakob died, the skull was left to Joseph.³⁶

³¹ Ibid, 53.

³² Ibid, 116. Today, some of these notations on the skulls do not match what is written on the catalogue cards, which is a source of great confusion for the museum staff.

³³ "Hyrtl Collection of Skulls," *The Catalogue of the Mütter Museum Vol. 1*, 1884.

³⁴ Gretchen Wordern, "The Hyrtl Skull Collection," *Transactions and Studies of the College of Physicians of Philadelphia* 17 (1995): 109.

³⁵ "Hyrtl Collection of Skulls," 1884.

³⁶ Dickey, *Cranioklepty*, 177. The skull now resides at the Mozarteum in Salzburg.

Although Dr. Hyrtl may have used his skulls for research into his theories of comparative anatomy, he also collected them for the sake of keeping up with his colleagues. During the time that Hyrtl was acquiring his skulls, medical men (both professional and charlatan) were scrambling to acquire skulls to “display in their waiting rooms and surgeries.”³⁷ Hyrtl, like these other skull collectors, was simply collecting skulls because it was seen as a status symbol; skulls were rare and only the wealthy could afford to have someone procure the skulls for them.

By 1870, Hyrtl began to sell off his vast collections of anatomical objects. This action was a direct result of his decision to retire from his post at the University of Vienna.³⁸ Wanting to find good homes for his treasured objects, Hyrtl began to write letters to various medical museums around the world, offering his collections for the right price. On October 29, 1873, one such letter was sent to Dr. Thomas Hewson Bache, who was acting curator at the Mütter Museum at the College of Physicians in Philadelphia. In the letter, Hyrtl states that he would “feel very happy if the anatomical treasures, or part of them, should find a hospitable roof in a great scientific establishment, instead of being dispersed in various universities.”³⁹ Hyrtl enclosed a catalog listing of what he was selling, including his collection of crania which he told Bache was “perfect [the skulls are] snowy-white, teeth complete, inferior maxilla moveable, with elastic wires. Such a collection will never again be brought together.”⁴⁰

³⁷ Folke Henschen, *The Human Skull: A Cultural History* (New York: Frederick A. Praeger, 1966), 106.

³⁸ Kemper, *Whatever Happened to Joseph Hyrtl?*, 18.

³⁹ Joseph Hyrtl, letter to Thomas Hewson Bache, October 29, 1873. Collection file, Mütter Museum, Philadelphia, PA.

⁴⁰ Ibid.

After speaking with the board members of the College of Physicians, as well as traveling to Vienna to see Hyrtl's specimens, Bache agreed to purchase, for the College's museum, the crania collection minus the skulls of Mozart,⁴¹ as well as sets of Hyrtl's injections and preparations, for the "sum of six thousand four hundred and ten Prussian thalers."⁴² Before the skulls were shipped from Vienna to Philadelphia, Hyrtl wrote numerous letters to Bache, informing him how the skulls would be shipped and giving detailed instructions on how Bache should handle them once they had arrived. In one such letter, Hyrtl stressed the care that needed to be taken with his collection by writing that "when the cases [containing the skulls] were put in the waggon [sic] every case was seated on a pillow, and the whole company of them was surrounded with railings."⁴³

When the skulls arrived in Philadelphia in the fall of 1874, the scientific world was still in the throws of 'crania mania,' and Philadelphia, a city driven by medicine, was no exception. Before the Hyrtl collection arrived, Philadelphia already boasted one of "the largest collections of skulls in the world,"⁴⁴ the collection of Samuel G. Morton, which contained more than 1,000 skulls of varied Native Americans and Caucasians and had been amassed around the same time that Hyrtl was collecting his crania. But Morton's "American Golgotha"⁴⁵ was brought together by a fervent follower of phrenology and was used to 'prove' that each race

⁴¹ Although it was offered to him, Bache turned down the skull of Mozart (Gretchen Worden, letter to L.R. Karhuasen, May 30, 2001).

⁴² Legalized agreement signed by Joseph Hyrtl and Thomas Hewson Bache, April 21, 1874. About \$4,800 (Erin McLeary, "The Mütter Museum: Education, Preservation, and Commemoration," *Annals of Internal Medicine* 132, no. 7 (2000): 599.)

⁴³ Joseph Hyrtl, letter to Thomas Hewson Bache, June 24, 1874.

⁴⁴ Gould, *The Mismeasure of Man*, 86.

⁴⁵ *Ibid*, 83.

was a separate species and, therefore, show that Caucasians were scientifically the dominant species.⁴⁶

Hyrtl's collection, on the other hand, came to Philadelphia to join a small, but "extensive pathologic teaching collection" collected by Dr. Thomas Dent Mütter.⁴⁷ The 139 crania were to be used by the students at the College of Physicians (of which the Mütter Museum was a part) in order to give them hands-on training in anthropometry, or "the conventional art or system of measuring the human body and its parts." Correctly practiced, anthropometry required "the complete elimination of personal bias, and the furnishing of absolutely correct data" on the dimensions of the human body.⁴⁸ The collection served another purpose as well; the acquisition of Hyrtl's skull collection "gave legitimacy to the museum, making its change from a personal collection to a full-fledged medical museum"⁴⁹ and, eventually, one of the finest in the country.

The Mütter Museum and 19th Century Medical Training

When Hyrtl's skulls arrived at the College of Physicians in Philadelphia in the fall of 1874, they became part of the collection of the College's Mütter Museum. Up to that point, the Mütter had been a small educational collection, built for the benefit of those who attended the College. But with the addition of the Hyrtl collection, the Mütter would become one of the premier medical museums in the country and, like

⁴⁶ Ibid, 84. It was later found, through reexamination of his data, that Morton manipulated his data to fit his theory (Quigley, *Skulls and Skeletons*, 106.)

⁴⁷ McLeary, *Annals of Internal Medicine*, 599.

⁴⁸ Aleš Hrdlička, *Anthropometry* (Philadelphia: The Wistar Institute of Anatomy and Biology, 1920), 7.

⁴⁹ Kemper, *Whatever Happened to Hyrtl?*, 107.

other medical museums of the time, would reflect the methods of teaching medicine during the 18th and 19th centuries.

When the Mütter Museum was founded in 1863, medical museums were nothing new in either America or the Western World. Most were located in major cities and were associated with state-supported universities or with the city's hospitals.⁵⁰ Most medical museums' collections contained preserved specimens or wax models that allowed students to study both ordinary and rare pathologic conditions.⁵¹ The Mütter was no exception. Medical museums were seen as something of a cross between a library and a laboratory: a place where students could be exposed to the actual objects of their study and where the faculty could have space and facilities to conduct their own research on certain rare conditions that would not typically be seen in the hospitals.⁵² They were not meant to replace classroom education, but rather to enhance the instruction of medical students and to help increase the knowledge of both students and practitioners in the fields of pathologic anatomy.⁵³ With the array of different specimens—wet and dry, wax casts and real, preserved tissue—medical museums could display these objects for students to visit and inspect at their leisure. The museums also made these specimens available to the hospital or college teaching staff to use in their lectures. In his report to the Carnegie Foundation for the Advancement of Teaching on the state of medical education in the United State and Canada, Abraham Flexner made it

⁵⁰ John Shaw Billings, "Medical Museums: with special reference to the Army Medical Museum at Washington" *The Medical News* (1888).

⁵¹ McLeary, "The Mütter Museum," 600.

⁵² *Ibid.* Often, in return for the use of the museum's facilities, the professor would donate samples of his work to the museum's collection.

⁵³ *Ibid.*

clear just how important a medical museum was to a college: "The conclusive evidence of lack of educational conscience or pride is the general absence of a decent museum."⁵⁴ When listing each of the existing medical educational institutions, Flexner makes a point of noting the existence (or lack thereof) of a medical museum and the state of its collections and pathological specimens.

The nucleus of the collection of the Mütter Museum came from a Philadelphia surgeon name Thomas Dent Mütter, who had spent 24 years of his professional career⁵⁵ assembling a small, but all-encompassing, pathologic teaching collection of 1,700 wax models and preserved wet specimens.⁵⁶ The impetus for the assembly of this collection came from Mütter's education in Paris, where he came to firmly believe that the best method of teaching medicine was "based on close observation of actual cases."⁵⁷ Dr. Mütter was well known throughout Philadelphia as one of the premier reconstructive surgeons,⁵⁸ as well as a wonderful orator and professor at Jefferson Medical College. Shortly before his death, Dr. Mütter donated his collection to the College of Physicians in Philadelphia, with the stipulations that a museum be created to house his collection, that the museum be named after him, and that it be free to all physicians and medical students.⁵⁹

⁵⁴ Abraham Flexner, *Medical Education in the United States and Canada* (New York: Carnegie Foundation for the Advancement of Teaching, 1910), 82.

⁵⁵ Ibid, 599.

⁵⁶ Jennifer Baker, Charles Yeo and Pickney Maxwell, "Thomas Dent Mütter: The Humble Narrative of a Surgeon, Teacher, and Curious Collector," *American Surgeon* 77, no. 5 (2011): 664.

⁵⁷ Gretchen Worden, *Mütter Museum of the College of Physicians of Philadelphia* (New York: Blast Books, 2002), 9.

⁵⁸ Samuel D. Gross, "Thomas Dent Mütter (1811-1859)," *Autobiography of Samuel D. Gross, M.D., ...: emeritus professor of surgery in the Jefferson medical college of Philadelphia. With sketches of his contemporaries, Volume 2* (Philadelphia: G. Barrie, 1887), 304. Mütter was most skilled "in operations performed for the relief of deformities arising from scalds and burns."

⁵⁹ J. Baker, *American Surgeon*, 664.

Mütter's collection joined the 92 objects that were already part of the College's original "Pathological Cabinet of specimens" which had been assembled by Dr. Isaac Parrish in 1849.⁶⁰ This original collection had not been intended as a medical museum, but the objects it contained were to be used as demonstration materials during the College's scientific meetings. It was only with the addition of Dr. Mütter's collection that the museum actually came into being.

For the next ten years, most of the new acquisitions for the Mütter came from the fellows of the College of Physicians who would often contribute specimens that they had collected during their practice.⁶¹ It wasn't until the purchase of the Hyrtl skull collection that outside donations or purchases became the main source of new material. In fact, it seems as though the Hyrtl acquisition was the match that lit the fuse, for after 1874, several large collections were acquired. In 1874, the year in which the Hyrtl collection was brought to the museum, a few members of the College of Physicians had performed the autopsy on the famous Siamese twins, Chang and Eng. Although the bodies were returned to the twins' hometown for burial, a full-body cast (showing "the band of skin and cartilage that connected them") made after the autopsy as well as their conjoined livers were given to the Museum.⁶² Other notable acquisitions include the "Soap Lady" (a woman's corpse that, due to burial conditions, had decomposed to just her fatty, adipose tissue), a

⁶⁰ Worden, *Mütter Museum*, 177.

⁶¹ *Ibid*, 10.

⁶² *Ibid*, 11.

skeleton of a 7'6" giant from Kentucky, and a portion of the thorax of John Wilkes Booth.⁶³

As the 19th century came to a close, the Mütter's collection policy began to shift. While the pathological and anatomical specimens were still the main attraction, the College had passed a resolution in 1871 that allowed the museum to collect not only medical specimens but also "obsolete medical instruments" which reflected "changes in the technology of medicine."⁶⁴ This change to the collection policy brought in many new objects, making it necessary for the College to move to a bigger building, which was completed in 1910. Not only did the collecting of these out-dated pieces of medical technology bring a historical perspective to the Mütter, but it also "embodied a physician's career" since many of these tools were given to the Museum by their users upon their retirement from the profession.⁶⁵ It was perhaps this switch in collecting that was one of the factors that saved the Mütter Museum from the fate that befell most medical museums.

Medical museums remained an important part of medical education up to the first few decades of the 20th century. However, the nature of pathology was beginning to change. Instead of being focused on looking at the physical attributes of a disease, the pathological sciences were moving out of the museum and into a

⁶³ The Civil War brought with it a fresh supply of anatomical specimens that showed the physical damage caused by certain types of weaponry. It also brought about another round of scandal as it was found that locals had pilfered graves on both sides for the "purposes of studying anatomy." (Drew Gilpin Faust, *This Republic of Suffering: Death and the American Civil War* (New York: Random House), 222)

⁶⁴ Worden, *Mütter Museum*, 12.

⁶⁵ McLeary, *Mütter Museum*, 601. With the passage of this resolution, the Mütter was able to acquire such historically relevant objects such as Florence Nightingale's sewing kit and an Emerson iron lung.

laboratory and became centered more on diagnostics.⁶⁶ With the development of affordable and reproducible photography, researchers and students no longer needed wax casts or preserved specimens in order to study rare and unusual diseases. The skills needed to succeed in this new breed of pathology could not be acquired in a medical museum and this spelled the end for the majority of medical museums in the United States.

The Mütter Museum, however, survived. This was due to the change in collection policy from strictly anatomical and pathological specimens, to historic medical technology. In the 1930s and 1940s, those medical museums that did keep their doors open were able to do so because they began to cater less to the medical community and more to the public at large. Although hesitant at first, the staff of the Mütter Museum soon realized the importance it could have teaching the general population about the study of medicine and pathology and its history in the United States. With its opening to the general public, the Museum's main audience switched from medical students and faculty to people who have "not experienced the medical students' rite of passage and initiation into the mysteries of the profession."⁶⁷ Those who come to the Mütter today come to learn, just as those who used the museum before, yet they also come to pay respects to these "relics of individual lives and painful deaths."⁶⁸

While this transition from medical students to the general public has mostly been smooth, it has also brought with it some challenges and problems, such as how

⁶⁶ McLeary, *Mütter Museum*, 602.

⁶⁷ Worden, *Mütter Museum*, 8.

⁶⁸ McLeary, *Mütter Museum*, 603.

to make the collection relevant to a modern audience, as well as the ethics of displaying such a collection.

Ethical Considerations for the Hyrtl Collection and the Mütter Museum-Past and Present

In the last decades of the 20th century, questions began to be raised about the ethics of collecting and displaying human remains in museums. At issue was not only whether showing human remains without previous consent was acceptable. Questions were also raised about the often-problematic provenance of remains and about their educational impact. Today, the debate still rages over whether or not showcasing human remains in museum exhibitions crosses a line. Remaining medical museums face public scrutiny as to the ethical implications of publicly exhibiting their peculiar collections.

Two major catalysts in the debate over the collection and display of human remains were NAGPRA and the exhibition *Body Worlds*, both in the 1990s. In 1990, the United States Congress passed the Native American Graves Protection and Repatriation Act (NAGPRA), which addressed the repatriation of, among other things, Native American human remains and funerary objects held by American museums.⁶⁹ The law was the result of years of claims by federally recognized Native American tribes to the Native American skeletal and burial material held by museums around the country. Then in 1995, Dr. Gunther von Hagens debuted his now world-famous exhibition, *Body Worlds*, which featured preserved human

⁶⁹ Marie C. Malaro, *A Legal Primer on Managing Museums Collections*, 2nd ed. (Washington: Smithsonian Books, 1998), 40.

cadavers in various states of dissection and posed in artful stances.⁷⁰ The exhibition became incredibly popular and resulted in the formation of many knock-off exhibits that were not as careful about provenance as the original. Both NAGPRA and *Body Worlds* became touchstones for the serious questions raised over museums holding and displaying human remains.

As a result of NAGPRA and *Body Worlds* and its knock-offs, suddenly all human remains held and exhibited by museums came under scrutiny. The museums that owned them needed to justify why they had human remains in their collections and to prove that those remains did not come to the museum through disreputable means. More than ever, having complete provenance became essential to museums that displayed human remains. There are three ways these specimens might have arrived in a museum's collection: donated by individuals or their family members; legally obtained by 18th- and 19th- century laws; or illegally obtained through body snatching.

Unlike today, when many individuals find value in leaving their remains to science, in the time before the 20th century such a choice would have been met with horror and revulsion. Most Christians believed in a literal resurrection of the body on the Day of Judgment. For that resurrection to happen, every piece of the body had to be in the same place, still attached. Any action, therefore, that separated any parts of the body (i.e., autopsies or dissections) meant there would be no

⁷⁰ Institute for Plastination, "Exhibitions," Gunther von Hagens' Body Worlds: The Original Exhibition of Real Human Bodies, http://www.bodyworlds.com/en/exhibitions/current_exhibitions.html (accessed February 4, 2012).

resurrection for that individual.⁷¹ These beliefs severely limited the number of bodies that the medical communities could use for anatomical study. Ultimately, there were two solutions: lawful obtainment and body snatching.

In sixteenth-century Britain, “dissection became recognised [sic] in law as a punishment, an aggravation to execution, a fate worse than death.”⁷² A similar federal law, giving judges the option of adding an additional penalty of dissection to a murder’s death sentence, was passed in the United States in 1790.⁷³ The double punishment of execution and dissection was given to the truly despicable criminals, as it was believed that no punishment was worse than “to deny the wrongdoer a grave.”⁷⁴ This practice also allowed for the remains of some criminals to be preserved and then housed in medical museums once the medical schools were finished with them.

The amount of bodies legally available in a system that meted out dissection as the ultimate punishment was small. Between 1768 and 1876, an estimated 17,000 students graduated from Pennsylvanian medical schools, alone.⁷⁵ With similar numbers in almost every one of the medical colleges and teaching hospitals in the United States, the bodies of executed criminals did not provide a sufficient

⁷¹ Mary Roach, *Stiff: The Curious Life of Human Cadavers* (New York: W.W. Norton, 2003), 40. This belief wasn’t restricted to Western societies; the Zoroastrians (who conducted exposed burials) still took “good care to fasten them well, that no bone [should] be scattered and be found missing on the day of resurrection.” (Gonzalez-Cruisi, *Suspended Animation*, 30)

⁷² Richardson, *Death, Dissection and the Destitute*, 32. Peter Linebaugh wrote in *Albion’s Fatal Tree* that it was “at the gallows . . . we find that the history of the . . . poor and the history of . . . science intersect.” (Douglas Hay, Peter Linebaugh, John Rule, et. al., *Albion’s Tree: Crime and Society in Eighteenth-Century England*. Quoted in Richardson (30).)

⁷³ Raphael Hulkower, “From Sacrilege to Privilege: The Tale of Body Procurement for Anatomical Dissection in the United States,” *The Einstein Journal of Biology and Medicine* 27, no.1 (2011): 23.

⁷⁴ *Ibid*, 26.

⁷⁵ Suzanne M. Schultz, *Body Snatching: The Robbing of Graves for the Education of Physicians in Early Nineteenth-Century America* (Jefferson, NC, McFarland and Co., Inc., 1992), 14.

and reliable source of educational materials. While the law allowed for some corpses to be dissected in the hospitals and medical colleges near execution places, there still weren't enough bodies to meet the need, so the few that did make it to the dissection room were used as much as possible, leaving little for the museums, save for skeletal material. Indeed, while these laws and statutes might have seemed generous on paper, in many states the statutes contained contingencies and exceptions that, in the end, allowed for only a few bodies to legally come to the student.⁷⁶ And yet, it is estimated that during the 18th and 19th centuries, somewhere between 4, 200 and 8,000 (some estimate the number to be as high as 16,800) dissections were performed in Pennsylvania alone, in order to ensure that all students would graduate with an intimate knowledge of physiology and anatomy.⁷⁷ This means that most universities, and in turn most museums, turned to the second, and far less legal, solution to the body shortage problem: body snatching.

While body snatching was illegal, morally questionable, and scandal-ridden, supplying cadavers on which students could practice their techniques "was certainly far preferable to turning hundreds of students out to ply their trade on live patients."⁷⁸ If American institution wished to retain their students and not lose them to the schools in Paris, where corpses of the poor could easily be procured from city hospitals, they had to provide whole human cadavers for their students.⁷⁹

⁷⁶ B.W. Roby, "Must Have Dead Bodies: The Public Demands Knowledge," *Topeka State Journal*, December 28, 1895.

⁷⁷ Ibid.

⁷⁸ Schultz, *Death, Dissection and the Destitute*, 20.

⁷⁹ Roach, *Stiff*, 42. During a scandal involving grave robbing for the Kansas Medical College in Topeka, KS, a student admitted to the newspaper that there had been a student-led strike in the

Medical museums, initially, were seen as a cure to the rampant problem of body snatching in the United States because these museums offered chemically preserved human specimens and wax casts that could be viewed and studied over and over again. Medical professionals realized, however, that nothing could replace student learning through dissection. Body snatching, therefore, remained rampant. Many of the specimens that were left in the care of medical museums were themselves procured by means of the body snatchers (or 'resurrectionists'⁸⁰) in the pursuit of scientific advancement.^{81, 82} In the case of the Mütter Museum and the Hyrtl Skull Collection, Dr. Hyrtl was not above using grave robbers to procure his skulls. Hyrtl even boasted in his listing of the skulls that skull 1006.129 had been "stolen by myself" from the catacombs of St. Stephen in Vienna.⁸³

In more recent history, legislation has been enacted making it legal for ordinary individuals to leave either their whole body or individual body parts to medical institutions. The taboo of dissection is gradually disappearing and more

dissection room "because there was a shortage of dissecting material and some of the students threatened to leave the institution." (Larry Jochims, ed., "Dec. 13, 1895," *Clippings Concerning Kansas Medical College and Grave Robberies 1895-1896* [Topeka, KS: Kansas State Historical Society].)

⁸⁰ The term 'resurrectionist' is thought to originate from the belief that "the burial ground was sacred and that the removal of a body from 'God's Acre' was interference with the plan of Providence and the great Resurrection." (Schultz, *Death, Dissection and the Destitute*, x) According to humorist Ambrose Bierce, the grave was simply "a place in which the dead are laid to await the coming of the medical student." (Ambrose Bierce, "Grave," *The Devil's Dictionary* (New York: Bloomsbury, 2003), 46.

⁸¹ Charles Lawrence, *History of Philadelphia Almshouses and Hospitals* (Philadelphia: Charles Lawrence, 1905), 215.

⁸² Many of the museums that have human remains that fall under NAGPRA's purview acquired them by means of grave robbing and body snatching. In the past, soldiers and local scavengers would take trophies and souvenirs (including weapons, vestments and the remains of Native Americans) from the battlefield after the fight was over. These items eventually would find their way into a museum's collection, where they would be placed on display, often for no other purpose than being a curiosity.

⁸³ "Hyrtl Collection of Skulls," *The Catalogue of the Mütter Museum Vol. 1*, 1884. Hyrtl also mentioned using resurrectionists to procure his skulls in a letter to Bache, stating, "the gravestealer must be largely bribed" for their services (Hyrtl to Bache, October 29, 1873).

and more individuals leave their remains to scientific institutions. Although there is no exact number, it has been estimated that at least 17,500 bodies are donated to science annually in the United States today.⁸⁴ People can also now choose to leave their bodies to the Institute for Plastination, which is responsible for the preserved human bodies in *Body Worlds*. While the knock-off versions of *Body Worlds* raised certain questions regarding provenance, the original *Body Worlds* exhibit prides itself on using strictly donated bodies. As of 2004, over 5,000 visitors to the exhibitions had signed the forms where they agreed to donate their bodies to the Institute.⁸⁵ *Body Worlds* is not the only place to which people can choose to leave their mortal remains. The Mütter is still collecting unique specimens that fit its mission but the museum is not collecting as actively or extensively as it once did. In 2011, a couple donated the body of their stillborn child to the museum because the child had developed a rare disease that the Mütter believed needed to be studied.⁸⁶

In addition to provenance, a major issue surrounding the exhibition of human remains is whether museums, their staffs, and the public can accord the proper respect for the human remains on display and whether or not the educational aspects of these specimens are justification enough for displaying them. Human remains have, as mentioned previously, been used to study the body and the diseases that often plague it; skeletons, in and of themselves, “furnish information about population demographics, nutrition, genetic drift and exchange and temporal

⁸⁴ Ronald Campbell, William Heisel, and Mark Katches, “The Body Brokers, Part 3 of 5,” *The Orange County Register*, April 18, 2000.

⁸⁵ Tony Walter, “Plastination for Display,” *The Journal of the Royal Anthropological Institute* 10, no. 3 (2004): 604.

⁸⁶ Interview between Anna Dhody, current curator of the Mütter Museum, and the author, February 2011.

changes within and among population groups," making them a major part of all facets of anthropological and ethnological studies.⁸⁷ To those outside the museum profession, the human body, even in death, seems to retain the identity it held in life.⁸⁸ In America, especially, many of the funeral arrangements are done with the 'comfort' of the departed in mind and, although the open casket vividly displays and confirms that the individual is indeed dead, many of the euphemisms used by the undertaker-'resting peacefully', for example-seem to present a denial of death.⁸⁹ When presented with a situation that goes against this denial of death-such as skulls in the Mütter collections or plastinated bodies *Body Worlds*- most people feel at once a revulsion toward the material presented and a (morbid) fascination with the human remains and skeletal material.⁹⁰

While the 1987 ICOM Code of Ethics states that collections of human remains "should always be available to qualified researchers and educators, but not to the morbidly curious,"⁹¹ Barbarian and Berndt believe that those labeled "morbidly curious" have just as much right to examine these specimens: "We believe that 'morbid' curiosity is as valid as curiosity about what causes the tides, who invented the telegraph, or the source of light in a Caravaggio painting."⁹² And to deny the

⁸⁷ Hunt, "The Value of Human Remains," 130.

⁸⁸ Jacque Lynn Foltyn, "The Corpse in Contemporary Culture: Identifying, Transacting, and Recoding the Dead Body in the Twenty-First Century," *Mortality* 13, no. 2 (2008): 100.

⁸⁹ Andrew Chamberlin, *Earthly Remains: The History and Science of Preserved Human Bodies* (New York: Oxford University Press, 2001), 173.

⁹⁰ Lenore Barbian and Lisa Berndt, "When Your Insides are Out: Museum Visitor Perceptions of Displays of Human Anatomy," in *Human Remains: Conservation, Retrieval and Analysis: proceedings from a conference held in Williamsburg, VA. Nov. 7-11th 1999*, edited by Emily Williams, 129-134. (Oxford: Archeopress, 2001), 264.

⁹¹ International Council of Museums, "Code of Professional Ethics," (Paris: International Council of Museums, 1987), 25.

⁹² Barbian and Berndt, "When Your Insides Are Out," 257.

public the chance to view human remains, which are so rarely seen, denies them a chance of knowing more about themselves.⁹³

Body World's detractors claimed that, although the provenance might be sound, the method of display was disrespectful and not educational. In his critical essay on the exhibition, Tony Walter claimed that the displays did not truly educate the public about the human body and its internal mechanisms and the labels themselves "tended not to be related to medical issues but focused more on artistic explanation of the pose."⁹⁴ But while many saw the exhibition as disrespectful to the dead or simply being sensationalist, as of the last count, over 34 million people worldwide visited the exhibition in its various locations.⁹⁵

Gretchen Worden, the past curator of the Mütter, also justifies the continued exhibition of the Mütter's human remains with an educational argument, saying:

It is still on display because it still has a great deal to teach modern audiences, not only about physical variation, but also about the sociology of mid-19th century Europe, about the beginnings of physical anthropology and about the systematic collecting impulses of the time.⁹⁶

With the passage of NAGPRA, all museums that held human remains came under scrutiny. The Mütter, with its copious amounts of human specimens, also began to look at the provenance of its holdings, including the Hyrtl skull collection. It was found that most of the skulls had belonged to Eastern Europeans who had

⁹³ Paul Sledzik and Lenore T. Barbian, "From Privates to Presidents: Past and Present Memoirs from the Anatomical Collections of the National Museum of Health and Medicine," in *Human Remains: Conservation, Retrieval and Analysis: proceedings from a conference held in Williamsburg, VA. Nov. 7-11th 1999*, edited by Emily Williams, 227-235. (Oxford: Archeopress, 2001), 227.

⁹⁴ Vicki Cassman, Nancy Odegaard and Joseph Powell, eds., *Human Remains: Guide for Museums and Academic Institutions* (Lanham, MD: Altamira Press, 2007), 279.

⁹⁵ Institute for Plastination, "Exhibitions," (accessed February 4, 2012).

⁹⁶ Gretchen Worden (curator of the Mütter Museum), e-mail message to Kerry Marder (graduate student) in response to her questions regarding why the Hyrtl Skulls were still on exhibition. Filed in Hyrtl object files, Mütter Museum.

died either at the gallows or in city hospitals. Unlike Native American remains that fall under the NAGPRA law, any “descendants of the Hyrtl skulls, or other speaking on their behalf, would not have legal standing . . . beyond the rights normally granted to descendants.”⁹⁷ Moreover, although the name of each individual whose skull is in the Hyrtl collection is known and these names have been published widely, the museum has “never heard from a single descendant of any of those individuals.”⁹⁸

While the Hyrtl Skull collection may not legally be a candidate for repatriation, does the fact that it was collected through illegal means make it illegal or unethical to continue to exhibit them? From a moral standpoint, many of the detractors of medical museums and their collections often ask, ‘What if it was your own ancestor on display?’ According to the National Museum of Health and Medicine—one of the other medical museums to survive the century shift—“families take a great pride that their relative is a part of [the museum’s] collection”⁹⁹ and few if any issues regarding remains in medical museums have been raised by descendants.

Unlike *Body Worlds*, which seems to use the controversy surrounding it as one of its main marketing tools,¹⁰⁰ the exhibits at the Mütter Museum are designed with the education of the public as their main purpose. The exhibits at the Mütter are not intended to shock or be weirdly artistic, like von Hagen’s show. While critics

⁹⁷ Worden to Marder, Hyrtl files, Mütter Museum.

⁹⁸ Ibid. In March of 1987, an article appeared in *The Hungarian Illustrated Magazine*, which discussed the Hyrtl Skull collection and mentioned, by name, several of the skulls of Hungarian origin. Still, the Mütter did not hear from a single individual claiming to be a descendent of one of the Hyrtl skulls.

⁹⁹ Walter, “Plastination for Display,” 610.

¹⁰⁰ Walter, “Plastination for Display,” 610.

might say that the cases are outdated and the materials presented gives the place the atmosphere of a freak show, when examined more closely, the collections of the Mütter Museum, including the Hyrtl skulls, are not on display because they are bizarre or will draw great crowds of gawkers. Despite their problematic and somewhat questionable provenance, the Hyrtl skulls remain on exhibit because of their educational impact and their importance in the history of the museum. The Hyrtl Skull Collection helps to fulfill the mission of the Mütter Museum, which seeks to be “a source of enlightenment to visitors of all backgrounds and ages, confirming that medicine and its fascinating history are a vital part of everyone’s heritage.”¹⁰¹

The Hyrtl Skull Collection and its Educational Uses Today

Despite some of the ethical questions that surround the Hyrtl skulls, the collection is displayed prominently on the upper floor of the Mütter Museum’s main gallery. All 139 skulls can be seen in the building’s original cabinets, lined up in rows that stretch from the floor to the ceiling. Very little has been changed in their display, including the labeling, which deals less with the history and importance of the collection and speaks more to the doctors and medical students who have long since departed the Mütter’s halls. While the methods of display leaves much to be desired, the Mütter Museum has recently been developing innovative ways that will introduce the Hyrtl collection to new audiences, with projects ranging from the scientific to the creative.

¹⁰¹ Worden, *Mütter Museum*, 14.

In 2008, the Mütter Museum partnered with the Penn Museum at the University of Pennsylvania to get complete CT scans of every skull in the Hyrtl Skull Collection. The project was funded through a major grant from the National Science Foundation and also included scanning skulls from the collections at the University of Pennsylvania, Columbia University and the American Museum of Natural History.¹⁰² The scanning project, which was recently completed, was undertaken with the aim of learning more about the skulls. Before, it was impossible to see what was on the inside of the skull without cutting into the bone itself, which, because the skulls are museum objects, was not an option. With the advances in medical technology, it is possible to get three-dimensional scans of both the exterior and interior of the skulls. According to Mütter Museum curator, Anna Dhody, these three-dimensional scans allow the researcher to “slice and dice the skulls [digitally] in a way that [the museum] would never allow anyone to do with the actual skulls.”¹⁰³ Through the scans, researchers will be able to more accurately compare the bones and measurements of multiple specimens, and not just those from the Hyrtl Collection. The project also allows for many of the largest skull collections in the United States to be digitally brought together into one database, the Open Research Scan Archive Online, where researchers can view and compare all of the scanned skulls at once. Each scan is paired with the object information from the various museum files, so all of the information that has been collected on the skulls

¹⁰² Penn Museum, *Penn Museum's CT Scanning Project Collaborates with Mütter Museum to Incorporate Hyrtl Skull Collection*, Press Releases, entry posted December 15, 2008, <http://penn.museum/press-releases/14-penn-museums-ct-scanning-project-collaborates-with-muetter-museum-to-incorporate-hrytl-skull-collection.html> (accessed February 19, 2012).

¹⁰³ Anna Dhody (curator of Mütter Museum), phone interview with author, February 24, 2012.

is in one place.¹⁰⁴ Having the scans digitized means researchers now do not have to have the original skulls removed from the exhibit in order to study them, which will, in turn, reduce the wear and tear on the skulls.¹⁰⁵

While the Hyrtl scanning project might have been done for the benefit of osteological researchers, the scans also have been used for a more artistic endeavor. Recently, artist Jeanne Kelly has used the CT scans in her project named *The Hyrtl Simulacrum*. *The Hyrtl Simulacrum*, which was undertaken by Kelly as part of her graduate thesis in Digital Technology, is a perfect marriage of science and art. Kelly was interested in the individuals and stories behind the skulls and she sought to make viewers of her art aware that these skulls once belonged to humans like them.¹⁰⁶

Kelly chose four individuals from the Hyrtl collection and downloaded the CT Scans from the University of Pennsylvania digital database. She then used her knowledge of forensic reconstruction techniques to determine tissue thickness on the skull, yet Kelly was not seeking to make these true forensic reconstructions. Instead, she simply wished to show that this was once an individual and to do that, she wanted the final product to look like a vintage photograph of the four individuals. To do this, she combined several old, period photographs of other individuals from the same geographical location as the actual person now in the Hyrtl collection. The photographs were then manipulated, so as to more accurately fit onto the skull, which was left as a ghost image behind the final photograph (see

¹⁰⁴ Penn Museum, *CT Scanning Project*, posted Dec. 15, 2008.

¹⁰⁵ Dhody, phone interview, Feb. 24, 2012.

¹⁰⁶ Jeanne Kelly, interview with the author, February 29, 2012.

Appendix A).¹⁰⁷ While there are only four pieces in the Hyrtl Simulacrum, Kelly's project has been garnering lots of attention; besides the Mütter adding the 2-D reconstruction photos to their permanent collection, the Hyrtl Simulacrum has recently been featured at the 2011 World Design Expo in Taipei, Taiwan and was exhibited at MAX2011 in Los Angeles.¹⁰⁸ Kelly hopes to add more photos to her Simulacrum in the future, as well as to perhaps help the Mütter design an interactive element for the Hyrtl exhibit.¹⁰⁹

The most recent project to deal with the Hyrtl Skull Collection is the "Save Our Skulls" project, which will be officially launched at the end of March 2012 and will address several of the labeling and display issues mentioned previously. Recently, the exhibit designer at the Mütter developed new mounts for the skulls that will reduce the impact of vibrations on the skulls. Because the skulls are on the Mütter's mezzanine, the display vibrates whenever a visitor walks past the case. With the new mounts, vibrations will no longer be a major concern. Before the skulls are installed on their new mounts, the museum wants to have conservation work done on each of the skulls. The Mütter also wants to print new labels for the skulls, as several of the old ones are falling down and are "a bit dated."¹¹⁰ In order to help with the costs of this project, the staff at the Mütter Museum came up with the "Save Our Skulls" project. Through "S.O.S," members of the public can choose to underwrite a particular skull for a yearly fee and, in return, will have their name

¹⁰⁷ Ibid.

¹⁰⁸ Jeanne Kelly, "The Hyrtl Simulacrum Installation @ The Mütter Museum." Jeanne Kelly website. <http://jeanne-kelly.com/2011/09/the-hrytl-simulacrum-and-the-mutter-museum/> (accessed March 1, 2012).

¹⁰⁹ Kelly, interview with the author, Feb. 29, 2012.

¹¹⁰ Dhody, interview with the author, Feb. 24, 2012.

placed on the object label. Not only will the project raise awareness of the skull collection, it will also help to conserve and re-house the skulls in safer mounts.

One of the most important changes that will be made to the Hyrtl exhibit is the relabeling of the skulls. When the Mütter became a public museum, its visitor demographic completely changed. The museum's main visitors became the curious, who came to look at the Mütter's bizarre holdings. The majority of visitors today have no medical background, which means that the labeling for the objects needs to be changed. While many of the object labels in the Mütter have been modified so that those without knowledge of gross anatomy can understand them, the Hyrtl Skull collection seems to have missed out on this update.

Each skull in the collection has its own label that gives nationality, name, age, manner of death and any anomalies that may exist in the bone of the skull. Besides these individual labels, there are two 'main' labels that are associated with the collection as a whole. One of these gives a very brief history of the collection; the second is a small label with a rudimentary graphic of a skull that serves to introduce the major bones of the skull to visitors. Both the main labels and the individual labels, however, miss the educational mark. All of the labels appear to have been produced on typewriters, and, with small and stodgy print, they are hardly noticed when set against the shocking background of the rows and rows of skulls.¹¹¹ The educational graphic of the skull, which identifies the major bones, seems outdated and as though it was thrown into the exhibit as an afterthought. The separate skull labels, while informative about the individuals to whom the skulls belonged, don't

¹¹¹ It wasn't until the author's third visit to the museum that she noticed the 'main', explanatory labels for the Hyrtl Skull Collection.

offer much by way of education. At the bottom of the labels of certain skulls, certain anomalies are mentioned: “persistent frontal suture”, “complete synostoses with coronation”, “tremendously long styloid process”, to name a few.¹¹² For one who has studied skeletal anatomy, it is relatively easy to find these anomalies. Yet, as previously mentioned, most of the Mütter’s current audience has no such background. With no explanations or definitions of what and where these anomalies are and only a small graphic that identifies only six or seven bones in the skull to aid them, finding and understanding what these words refer to is almost impossible. Thankfully, the Mütter is planning on relabeling the skulls and the exhibit as a whole. However, to what extent the labels will be re-written is uncertain at the time of this publication.

Another issue that is only addressed in passing on the exhibit labels has to do with the reason why the skulls were collected in the first place and how skulls have been used to determine a person’s race or level of intelligence over the centuries. While Hyrtl was not a subscriber to the ‘science’ of phrenology, that subject should be addressed because it was one of the main reasons men of science acquired human skulls during the 18th and 19th centuries. Over the years, the skull and its characteristics have been used to separate people based on their race, culture or intelligence. During World War II, Adolph Hitler and his followers used many of the tenets of phrenology to ‘prove’ that Jews and others they had labeled ‘undesirables’ were mentally inferior to the Aryan race. It is of extreme importance that the public is educated on the history behind the skull and the concept of race.

¹¹² “Hyrtl Collection of Skulls,” *The Catalogue of the Mütter Museum Vol. 1*, 1884.

The Mütter Museum prides itself on being a medical museum and not a freak show, and they are intent on having the public look beyond “the deformed, the broken, the disfigured body . . . of those forced to endure these afflictions, . . . doomed to horrible and prolonged suffering.”¹¹³ With an exhibit such as the Hyrtl collection, the sheer number of skulls along one wall is a sight unseen in the rest of the United States and this shocks, and even unnerves, some visitors. The individual aspect of each skull gets lost in the crowd and, if one only spends a few minutes looking at the exhibit, one skull looks very much like the rest. This makes the task of showing that these were once people like us even more difficult.

The connecting factor between the problems surrounding the skulls’ display and labeling is the education of the Mütter’s visitors. It is essential that they learn about the collection’s history and importance, as well as realize that each of the skulls once belonged to an individual of a certain gender, age, and nationality. . An ideal way to teach the visitor about the skulls collection would be through a touch screen or multi-touch panel. This would allow visitors to choose how much information they want to get on a certain skull. Interactive elements, in general, help to provide context that allows the visitor to appreciate the artifacts and understand the process that put them on display.¹¹⁴ Understanding the “why” of a display is incredibly important in a medical museum, where the exhibits are meant to be educational and not something out of a freak show. While labels would also get this information across, they take up much more space on the walls. In addition,

¹¹³ Worden, *Mütter Museum*, 7-8.

¹¹⁴ Nina Simon, “Making Participatory Processes Visible to Vistors,” *Museum 2.0*, entry posted April 6, 2011, <http://museumtwo.blogspot.com/2011/04/making-participatory-processes-visible.html> (accessed February 19, 2012).

museum visitors increasingly are expecting to see some sort of interactive element in the museums they visit. However in a setting such as the Mütter, where the 19th century appearance of the galleries is in itself an attraction, a shiny piece of technology would not fit very well. Also, in an exhibit like the Hyrtl collection, with so many objects competing for the visitors' attention, a large, bright interactive would just be one more competitor. Yet, some sort of interactive element might be able to help make this otherwise static exhibit a compelling and educational one.¹¹⁵

One way that the Mütter might be able to strike a balance between keeping the 19th-century feel of the museum and incorporate an interactive element with the Hyrtl exhibit is to use a feature that the museum already uses in a few of its other exhibits: cell phone audio tours. Visitors call the number found on the audio tour label and then enter the number of the object or collection they wish to know more about. With the Hyrtl Collection, there might be two or three numbers that the visitor could enter, each corresponding to audio that would give them information on the history of the collection, a brief synopsis of the individuals whose skulls are in the collection, and perhaps more on the recent projects that the Mütter is undertaking with the skulls. This would be a much less invasive than a touch screen table and would not be one more item that is competing for the visitors' attention. Another way in which the Mütter museum might incorporate an interactive element into the Hyrtl exhibit is through a smart phone application or "app." While more costly to develop than a cell phone audio tour, the app could incorporate the amount

¹¹⁵ Kathleen McLean, *Planning for People in Museum Exhibitions* (Washington D.C.: Association for Science-Technology Centers, 1993), 29.

and variety of information that would be found on a touch table, but without taking up space or being too flashy for the venue.

While the display of the Hyrtl skulls may need updating, the staff at the Mütter is not letting the collection remain in the past. With the CT scanning project and the Hyrtl Simulacrum, the Hyrtl Skull Collection is being rediscovered through modern technology. Both projects help researchers and the public to know more about the skulls and make a connection to the individuals they use to be. With the Save Our Skulls project, hopefully the Hyrtl Collection will get the updating and attention it needs to be more educational to the lay public.

Conclusion

The Hyrtl Skull Collection is one of the highlights of the Mütter Museum. It is a bizarre treasure that gives modern-day visitors a snapshot of the collecting practices of medical professionals of the late 18th and early 19th centuries. But while there may be historical reasons for keeping the skulls on display, many may question what their true purpose is in a 21st-century museum and if it is appropriate to display the skulls of individuals who did not give consent for their mortal remains to be on display.

After the passage of NAGPRA, there has been a nagging doubt in the minds of museum staff members and the general public as to the appropriateness of the display of human remains, especially those exhibited without the express consent of the deceased. Yet, while it is true that the Hyrtl Skulls were acquired through less-

than-legal means, there are good reasons why they must remain in their display case at the Mütter Museum.

First, the Hyrtl skull collection is unique and its removal would serve no purpose. It would be impossible to find the descendants of the men and women to whom the skulls belonged, therefore removing them from their display case would do little more than moving them to storage. While today no museum would even think about acquiring a collection of human skulls, the Hyrtl Skull Collection must remain on display at the Mütter Museum because of its importance to medical history as well as its long standing within the Mütter Museum.

Second, in regard to the appropriateness of displaying the skulls, the Mütter Museum is a medical museum. Its mission centers on displaying human remains and medical specimens for the education of the public. The museum offers a glimpse of what medical education was like in the past and reminds the viewer how the field of medicine has advanced over the centuries. The Hyrtl Skull Collection is an important part of medical history. It seeks to educate the Mütter's current visitors on the collecting impulses of the mid-19th century as well as on the usefulness of skulls for modern-day physical anthropologists to determine physical variation among different populations.

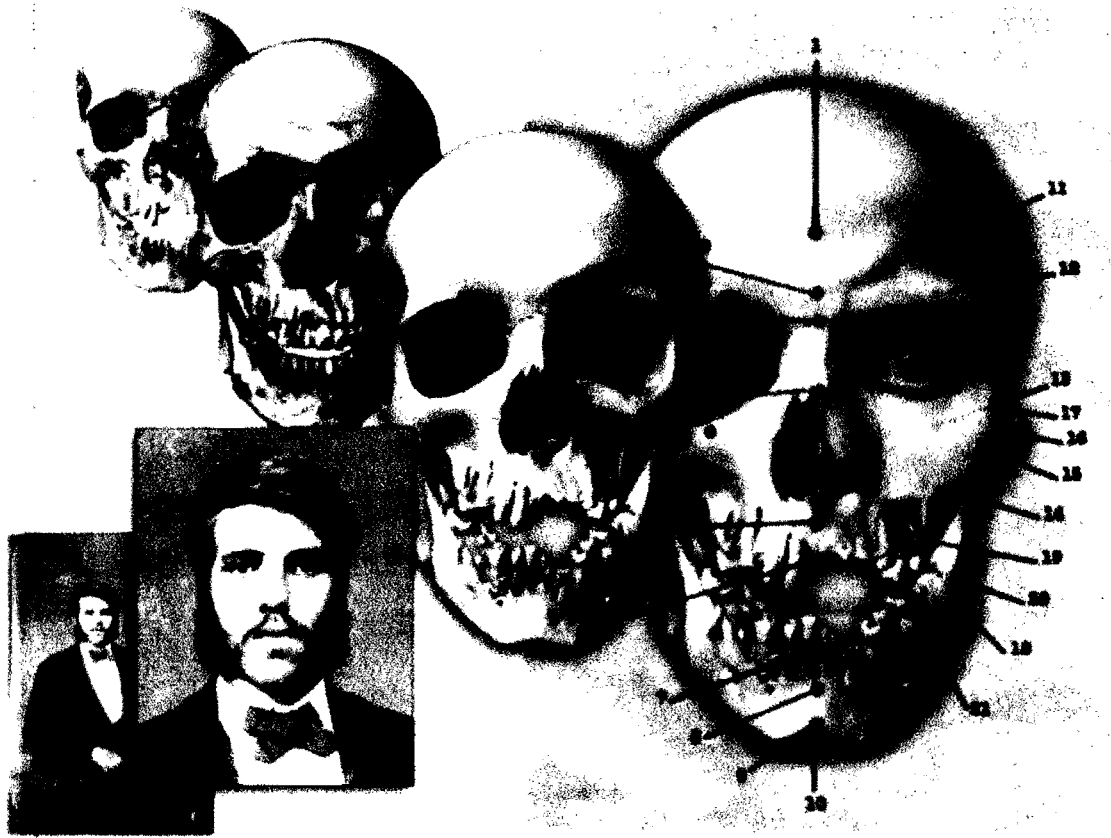
Third, there is, as of this writing, no law that requires the repatriation of all skeletal materials in museum and university collections, regardless of their cultural background. Those who might claim to be related to the skulls would not have any legal standing. If any descendent did approach the Mütter Museum about repatriation, there would naturally be room for discussion, but the Hyrtl Skulls have

been on display for over a hundred years, with the names of the skulls and their origins openly published over the years and not a single descendent or family has come forward to claim them or demand repatriation.

The Mütter is currently developing several programs that seek to show the public that the Collection is still relevant and important to the Mütter Museum and College of Physician's mission to "advance the cause of health while upholding the ideals and heritage of medicine."¹¹⁶ It is critical that the Mütter Museum continues to educate the public about this unique and amazing collection, through public programming as well as revitalizing the display of the skulls.

¹¹⁶ College of Physicians of Philadelphia. "General Information." *College of Physicians of Philadelphia*, http://www.collphyphil.org/Site/General_info.html (accessed March 29, 2012).

Appendix A – Examples of Jeanne Kelly's *Hyrtil Simulacrum*



A collage showing the process of taking the CT scan of the skull and identifying the tissue depth markers to begin to 'reconstruct' the face. Jeanne Kelly, reproduced with permission of the artist.



The final product: "Farkus, The Wounded Heart" Jeanne Kelly, reproduced with permission of artist.

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