

**Modern Cabinet of Curiosities:  
The Continued Human Interest in the  
Macabre and How Museums can  
Respond**

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## Abstract

In the Victorian era, the act of collecting objects that were representative of foreign cultures became a common practice for those with the wherewithal to travel. This practice evolved over time to involve objects that were macabre or different, leading the way for the modern freak show style of circus. In the modern age, this has been removed, except for in a museum setting. This research uses surveys to gauge the reactions of ninety-nine college-age subjects to the display of human remains in museums, as well as possible suggestions for more ethical display. The research reveals a general neutral feeling about the display of remains in various forms. Respondent suggestions involve the addition of consent from living relatives and information about the deceased. The research raises questions about possible bias and prior knowledge among the subjects. Further research is needed to create a more comprehensive view of the reactions of museum visitors to the display of human remains.

# Introduction

## Collecting through Time

Through time, the human race has collected objects. Originally this started in hunter-gatherer societies as collecting food and then evolved into “collecting” livestock, “collecting” land, and in the modern age the most common collected objects range from antique furniture to postage stamps (Thomann, 2017). These are the basics. Outside of these basics, however, there are those who collect “oddities”, defined as objects that catch the viewer’s attention as intriguing or strange. In the 16th century, the prevalence of collecting oddities from around the world began to rise, as world travel became more accessible to those with wealth and power. These collectors began to display their oddities from other cultures in cabinets, or rooms, forming what is now known as “Cabinets of Curiosities” or Wunderkammer. These cabinets of curiosities were the awe of Victorian society, a society that prided itself on its power over the world and how to show it. These became, in the loosest sense of the word, the first natural history museums, displaying animals and artifacts from lands far away, allowing the European world to get a taste of things just out of reach. These so-called “cabinets” would expand as travel continued, eventually filling rooms or buildings. The Pitt-Rivers Museum in Oxford<sup>1</sup> could be described as a modern cabinet of curiosities, objects piled high into the rafters and crowded into corners as it was when it was founded in the Victorian era. These collections awed and excited the audiences they attracted, where else would someone be able to see the shell of a Leatherback turtle or a Maori spear while living in Europe? Being able to reach the greater world through these collections was a display of imperialist power in England, France and the other colonial powers in Europe.

However, there is a good educational aspect in collecting. Most children collect before they can walk whether that be rocks or marbles. Adults do the same but they search for knowledge along with their collections (Bernstein, 2011). However, early collecting had several problematic qualities. Collecting began to warp and twist into

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<sup>1</sup> [Pitt Rivers Museum](#)

something more macabre. The cabinets of curiosity began to display other types of “curiosities”, such as stuffed deformed animals (Figure 1), the skulls of native peoples or jars of fluid with creatures as if they were suspended in time. These were meant to entice the imagination, rather than further the knowledge of the viewer (Aloi, 2020). The evolution of collecting began with these, and people loved it. The more macabre, the more grotesque, the more people wanted to see these collections. Collecting human remains, while always in the underbelly of society, became less taboo. At least, the collecting of human remains from native peoples in conquered lands, where they were seen as less than human, began to be considered acceptable. These collections grew in tandem with collections of living “curiosities,” known in the modern age as “freak shows”. The prevalence of these “freak shows” in the United States began in tandem with the growing novelty of the circuses in the late 1800s (Bogdan, 1988, pg 40-58). The misfortune of others became a pastime. With the expansion of imperialism came another study that only fed the monster of the collection of human remains. Ethnography is the study of the culture, and social structures, of different peoples. In some cases this served as a cover for studies of measurements and shapes of physical attributes in order to support the



*Figure 1: Detail on a cabinet of curiosity, the Sen Museum, Burgundy, Fr.*

claims of racists and those who wish to enslave local peoples or dehumanize other ethnicities. However, several collectors used this as a reason to collect. Joseph Hyrtl collected the skulls of people of various ethnicities in order to show their differences. Over time, Hyrtl gained a collection of over one-hundred and thirty-nine skulls that now sit on display in a museum related to the Philadelphia College of Physicians (The Mütter Museum<sup>2</sup>, 2020).

Thus, the collection of human remains grew into a profession. Doctors had been collecting for centuries in order to teach and learn, but now the

<sup>2</sup> [Mütter Museum of The College of Physicians of Philadelphia](#)

non-academic persons had a chance to get a collection on their own. But they did not want the standard skeleton, anyone could see that. These collectors, mostly high ranking military men or landed gentry, wanted something different, something exotic or bizarre. They wanted the remains of those who had a physical disability or abnormality. Joseph Merrick is an example of this. He was known as “The elephant man,” during his life and after his death. Many human remains, including those of Merrick, were taken without consent and used for purposes that they did not agree to while alive. His body is still on display at the London Medical college’s Pathological Museum albeit for researchers and medical professionals only (Durbach, 2010). Doctors used to have their “Resurrection Men” rob from graves in order to get them cadavers since cities reached the Industrial Revolution. Without legal means of getting the proper number of cadavers, medical schools had to use illegal means (Killgrove, 2015). Only recently have people begun to donate their bodies to science, giving express consent for their remains to be experimented upon after death.

There are a variety of theories surrounding the usage of human remains after death that seem to follow two paths of thought. Path one would be that since they did not give consent in life, they cannot give consent in death. Path two would be that since the remains no longer contain a human life, the body can be used for science. There are two exhibitions that are examples of each path, although it is up for debate which follows which path. They both display preserved human remains: Gunther von Hagen’s “BodyWorlds” exhibitions<sup>3</sup>, and Imagine Exhibition’s “REAL BODIES Exhibition”<sup>4</sup>, once Premier Exhibitions “BODIES: the Exhibition”. Due to the 2018 bankruptcy of the institution, the exhibition was sold (JND, 2018). Both use the same method of preservation, a process called plastination that preserves the muscles of the body by impregnating the tissues with various polymers and plastics (BodyWorlds, 2020). These bodies look as if they are living with proper color and expressions, only they are missing all of their skin.

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<sup>3</sup> [BODY WORLDS](#)

<sup>4</sup> [REAL BODIES](#)

There are a variety of theories surrounding the usage of human remains after death that seem to follow two paths of thought. Path one would be that since they did not give consent in life, they cannot give consent in death. Path two would be that since the remains no longer contain a human life, the body can be used for science. Where the two paths differ is regarding whether consent for the preservation and display was given in life. The BodyWorlds exhibition claims to have paperwork of consent for all of their displayed remains, as well as a waiting list of several thousand people (BodyWorlds, 2020). The motivation of those who wish to donate vary widely, from “I would like to make the human body - ‘the natural work of art’ - more accessible to anyone who’s interested” to “When this world comes to an end and Christ returns, He will raise me to new life with a new body, as is written in the Bible” (BodyWorlds Catalog, pg 35). Meanwhile, the REAL BODIES exhibition takes all of their remains from China, remains of unclaimed citizens. Roy Glover, the medical director at BODIES the Exhibition, openly told NPR that “[The bodies on display] are unclaimed, we don’t hide from it.” The owner of the exhibition, whose name was not included in the article, is unwilling to provide a paper trail for his donations aside from his assurances that all bodies were legally taken with consent (NPR, 2006).. So, both exhibitions claim that their bodies are taken legally and with consent. However, there is no way to be sure without seeing the paperwork and the process, as people tend to lie to protect things they have worked hard on. Either way, none of the remains that are displayed show the names of the individuals. They are labeled as “the Dancer”, “The Rider”, or “The Soccer Player” and posed in ways that reflect their labels (ex. The Dancer in mid-pirouette). Their names are missing. They are dehumanized while showing the basic tenets of humanity. The disconnect between the human visitor and the human display is possibly reinforced from a museum setting (BodyWorlds Catalog, pg 47-205).

These two are not the only exhibitions that have used human remains. Another famous, or infamous, exhibition was one involving the growth of a fetus in a large Chicago museum. This museum used the remains of fetuses, initially displayed at the 1933 World’s Fair in their various stages to show the growth of a fetus into an infant. This display of “Prenatal Development” is a continuing exhibition from the early 1900s that has changed over time (Cole, 1993). The Mütter Museum of the College of Physicians of



Philadelphia has an expansive collection that includes the body of a woman who's fat content turned her into soap, prepared microscope slides of Albert Einstein's brain, and the collection of Joseph Hyrtl which consists of 139 human skulls (Mütter Museum, 2020). This museum attracts people from across the country every year. The display of human remains does not deter people from looking. In fact it results in almost \$2.3 million in museum entry revenue, as stated on their most recent publicly available tax form (Guidestar, 2018) which equates to an approximate annual attendance of 130,739 visitors. If anything, it makes people stare harder.

There are other sites that straddle the line of both positive and negative display methods. The Tenerife Museum of Nature and Anthropology on the Canary Islands<sup>5</sup> displays a variety of pottery and tools that belonged to the native populations of the island, known as the Guanches. This collection also includes several mummified Guanches, showing their burial tradition. The mummified remains are displayed in an almost morgue like environment, where the remains are laid on shelves behind glass.



of several adult mummies and a few fetal mummies. There is no labeling or interpretation for these displays (Figure 2). While they do show an important part of Guanche culture, remains could be shocking to some who were not expecting it. However, the museum also offers a bypass walkway, where someone could avoid the mummies altogether and go into the more descriptive section of the

anthropological exhibition. The second half of this exhibition displays human remains in pieces, such as arm bones, skulls, or leg bones. These bones are identified as male or female of whatever age they were upon their death and are used as examples of what certain medical practices or maladies look like. The remains displayed have a clear

<sup>5</sup> [Museo de Naturaleza y Arqueología](#)

educational purpose, while some could argue that the display of the mummified remains in the previous room serve no purpose but to shock the visitor.

## Psychology of the Display of Human Remains

Why are people attracted to horror movies? Why is the phrase “everyone loves a good train wreck” so common? What makes people look when they see a car accident on the highway? For years psychology has been trying to study the human condition, all

*Figure 2: Mummified remains, Tenerife Museum of Anthropology and Nature, Kathryn Dragan*

while using the most unreliable instrument in the world, the human mind. People are hard to study because they are unpredictable. No matter how hard they are studied or how in-depth someone goes into the thoughts of a human being, there will always be an outlier that moves the data out of a bell curve and into a roller-coaster style ninety-degree drop. Even the most accomplished psychologists of the modern age are unable to completely explain human behavior, but they do have insights that others do not. For example, Carl Jung, a Swiss psychologist known for being one of the prominent researchers of analytical psychology. Jung’s theories used the already existing notion that there were three parts to human consciousness, the Id, the Ego and the Superego. This theory was first addressed in 1923 by Sigmund Freud in his essay titled “The Ego and the Id” (Freud, 1923). Jung theorized that within the “Id”, the deep subconscious of a person, is also something Jung named the “Shadow”. The Shadow was the part of the brain that was interested in the dangerous and the taboo, things that people are not supposed to do either by law or human nature. This is the part of the brain that would make humans watch the horror movie and be excited as the killer finds their next victim. Jung explains the Id as “... a moral problem that challenges the whole ego-personality.” (Aion, pg 20). Jung theorized that the deep subconscious where negative thoughts exist, these thoughts then are put into the world as projections of negative personality aspects on others. This aspect of the brain would be why people collected human remains and why the Philadelphia museum is still in business. There have been studies as to what humans are attracted to in the forms of images or scenarios. One study, done by Suzanne Oosterwijk of the University of Amsterdam, specifically

focused on morbid curiosity by showing test subjects a series of photos that were in three categories (social, physical, or natural) that contained either negative stimuli or positive stimuli, all chosen from the International Affective Picture System database. The results showed that “participants did not consistently avoid images portraying death, violence or harm, but instead chose to explore some of them.” (Oosterwijk, 2013). The most common choice of image portrayed negative social circumstances. Oosterwijk concludes that death, violence, or harm can invoke people’s curiosity just as other parts of life, if not more strongly.

Museums evaluate the effectiveness of their exhibitions through a variety of methods, most involving interaction with visitors and surveys. Best practice is to evaluate before exhibition development, during exhibition installation, and after the exhibition has been opened to visitors (Screven, 1990). Meanwhile, psychology has studied the human mind and human behavior. The combination of the two, however, is elusive. It is rare to find a study that goes into how people feel about an exhibition on a psychological level. Evaluations of exhibitions usually ask what people thought of the exhibition in the sphere of what they learned, as this is how museums tell what techniques used in the exhibition are working in teaching, and connecting to, the visitors. This research will ask the question of how people feel about the display of human remains and hopefully lead to further research into the thoughts of visitors into sensitive aspects of museum operation, such as repatriation of objects and remains, lack of representation, and other such topics. The current rise in societal discussions about such important topics makes this research particularly timely. Any search into the topics of the repatriation of remains from museums, as well representation of native cultures or varying races will bring up many different articles and viewpoints. For example, the American Alliance of Museums posted an article in June of 2019 titled “Building an Equitable Future: Museums and Reparations,” that touched on aspects of museum viewing and collecting that reflects on a harmful past to those who were marginalized (Merritt, 2019). A similar essay was published in 2018 by the International Council of Museums that focused on a global stage, titled “International repatriation of human remains of indigenous peoples” (Knowles, 2018). A search involving the words ‘museums’ and ‘human remains’ will bring up articles in prominent newspapers or blog posts from academics, such as one from University College of

London from a museum researcher about how her thinking was shifted upon deeper research into the subject. Her article identified a survey done by English Heritage, a historic preservation organization in England, that showed “only 9% of people opposed the display of human remains in museums suggesting there is still high demand for public display of human remains in museums (Deathridge, 2017)”.

## Review of BODY WORLDS' Catalog Literature:

### Dr. Josef Franz Wetz “The Dignity of Man”

The 2019 exhibition catalog for Gunther von Hagens' BODY WORLDS covers the whole scope of the exhibition in all its pieces, from history of plastination to a brief overview of what is displayed from each of the systems of the human body. With images of plastinates of specific body parts to displays of various ailments and parts of the systems, the catalog reads like an anatomy textbook. At the end of the catalog there are two essays by German philosopher Dr. Josef Franz Wetz. One of the essays, titled “The Dignity of Man,” touches on the philosophical reasoning for the necessity of BODY WORLDS. Instead of the textbook atmosphere that the rest of the book holds, the essay reads more like an anti-religion persuasive essay. For those who do not engage in philosophical debates, it is a tricky read, involving sentences such as “One only needs to say the word ‘dignity’ out loud to be shocked by its hollow ring. Like many big words, this one too has largely worn thin today. (Wetz 214)” This essay is an interesting addition to an otherwise informational exhibition catalog. However, the main goal of this essay is to convince the reader of the importance of the BODY WORLDS exhibition and the process of plastination. Dr. Wetz does this by bringing up the difference between a dead body and the deceased. To Dr. Wetz, and in turn the directors of the BODY WORLDS exhibition, “the deceased” is the person the living remember while “the body is disposed of (Wetz, 221).” There is much discussion about the treatment of the bodies of the dead and where the dignity of the living person ends. Dr. Wetz states that the major criticism comes from the major Christian churches of Germany (where the plastination process originated) due to their connection to politicians and journalists:

“In the debate about plastination and the exhibitions of plastinates, there was much talk about infringement of human dignity – that the dignity of the dead, that of their close relatives, even that of the general public, if not the whole of humanity, has been disregarded. This criticism was expressed by representatives of the two major Christian churches in Germany, namely the Lutheran Church and the Roman Catholic church who knew that they had support of politicians from different camps, and also by doctors and many journalists made themselves the mouthpieces of these accusations (Wetz, 222).”

Dr. Wetz is firm in his belief that Gunther von Hagan’s procedure is necessary and the treatment of the bodies of those who are deceased as “people ” is unnecessary. Respecting the wishes of the dead, to Dr. Wetz, is only done due to the social contract all people abide by. The bodies used in the exhibition are donated by the wishes of the deceased. They each have different reasons, some interestingly religious, while others wish to dedicate themselves to science. In the end, Dr. Wetz admits that “These products made from human remains were only truly in fact a means to an end (Wetz, 227).” Various sections of his essay are titled with questions such as “Objectification of a Dead body as a Result of Plastination?” or “Improper Anesthetization of Plastinates?” while the contents tout that the bodies used are not human anymore. As stated previously, his objections to criticism often bring about discussion of religious values and how organized religion, specifically Christianity, is the true culprit in allowing bodies to decay in their caskets without giving science its time with them. Dr. Wetz's final thoughts deny religious philosophy its space in this sphere of discussion, rounding his way back to the word dignity.

“The words ‘human dignity’ weigh heavily, even though they trip off the tongue so lightly. Precisely for that reason, they should also in the future be used more judiciously and with greater circumspection in all respects with regard to plastination. (Wetz,

# Research Process

## Methods

This research project went through an internal review board process (IRB) at the State University of New York (SUNY) at Oneonta. During this process, the research template went through several iterations in order to fit into appropriate ethical standards placed by SUNY. It was approved on October 21<sup>st</sup>, 2019 and the administration of the surveys took place in the following month, November of 2019. The research that was performed for this thesis was in the form of a non-invasive, voluntary survey of eleven questions. In order to administer the survey, the primary investigator first completed the Collaborative Institutional Training Initiative (CITI) Research Ethics and Compliance Training. All respondents who were administered the survey were over the age of eighteen and did not provide any identifying marks to the surveys other than their handwriting. They were each given a short explanation of the survey's purpose and were given the option to opt out. The surveys were numbered prior to administration to the students to remove any chance of correlation between name and number.

The survey was created by the primary investigator with the assistance of professors at State University of New York at Oneonta. These questions were used to gauge the feelings and knowledge of the respondents towards the display of human remains in different states and forms. The eleven questions are shown in Appendix I. Four of the questions are Likert items in which the subject circles an answer and then explains the answer if they feel inclined to. The scale is "Very Comfortable", "Comfortable", "Neutral", "Uncomfortable", and "Very Uncomfortable". These questions are asking the subject to answer how various displays make them feel, ranging from the display of preserved skeletal remains to hand drawings of human remains. Three further questions ask for yes or no answers about changes in opinion depending on a changed circumstance or gained knowledge about the remains. The subject is asked to circle an answer and then explain their thoughts if they feel inclined to. The next two questions, number eight and number nine, relate to the thoughts of the subject on the respectfulness

of the display of human remains. Question eight asks how the subject thinks about the respectfulness of the display of human remains with respect to the deceased, and number nine goes on to ask the same question in relation to the viewer of the remains. Both questions have a secondary part that asks for an explanation of the subject's thoughts. The final two questions ask for the thoughts of the subject on the display of remains where, in life, the person had a disability that manifested physically (elephantiasis, dwarfism etc.), and then the prior knowledge that the subject has about the preservation of remains.

The surveys were given to four separate groups at four separate times. The first group, identified by the number "1" at the beginning of their identification numbers, was Dr. Sallie Han's "Introduction to Anthropology" course at SUNY Oneonta. This was administered to forty-six students. The second group, marked by the number "2", was Dr. Tracy Betsinger's "Anthropology of Dying" course at SUNY Oneonta. This class consisted of twenty-eight students. The third group, marked by the number "3", was Dr. Betsinger's "Bioarcheology" course of twelve students. The final group, identified by a "4" in their identification number, consisted of thirteen members of the Cooperstown Graduate Program for Museum Studies (CGP), a graduate program from SUNY Oneonta. The CGP students were from both tracks (History and Science) of the program. These students were offered an opportunity to participate in the survey process during a break in courses. Fourteen students accepted and completed the survey before returning them. The data sets will be analyzed on their own before being combined into one greater data set and had the same procedures done as were done to the individual data sets. This is to discover any abnormal data within the groups separately before combining the data. The majority of the survey takers were Anthropology students, the first three data sets being members of the SUNY Oneonta cultural or biological anthropology majors. This does introduce the possibility of bias regarding certain questions. Such bias could be that, as a biological anthropology student, the respondent could be more comfortable with human remains. Cultural anthropology majors might also have a bias around the display of human remains due to proximity to such object or artifacts. The final data set comes from museum studies master's degree students. A number of these students have anthropology background, which could introduce similar biases. The respondents from

data set 4 have a higher level of education and are generally older than the freshman anthropology students from data sets 1 through 3. The personal background of the respondents could also have an effect on their answers. This was the reason for question seven (How much do you know about how human bodies are displayed and treated in exhibitions, such as within a museum?), in order to gauge any previous knowledge that the respondents might have.

There are specific questions that relate to the overall theme of this research that will be looked into using statistical analysis. In order to complete this analysis, each question will utilize a different statistical analysis. These analyses are to be done using a combination of Microsoft Excel and IBM's SPSS program.

The first question is "Are the respondents more uncomfortable with three dimensional remains, qualified as skeletons, mummies, organs or tissues, than they are with two dimensional remains, photographs or drawings?" The analysis will use the answers to questions 1, 2, 4, and 5. Since Likert item responses are considered ordinal, a Spearman Rank Correlation Coefficient will be calculated to test for association between answers. This will be done by comparing the answers from the first three questions (relating to three dimensional remains) to the answers with question 5 (two dimensional remains).

The second question will be "How do the answers between the museum studies students, (Data Set 4), compare to those of the undergraduate students (Data sets 1-3)?" The question will be analyzed through a Mann-Whitney test with the combined answers of data sets 1, 2, and 3, compared to the answers in data set 4. The data used in the Mann-Whitney test will be taken from questions 1, 2, 4, and 5. This test is being utilized due to its ability to replace a t-test for nonparametric data.

The final question is "Is there any correlation between those who prefer the use of casts and replicas to those that think museums should change how they display remains?" This analysis will use a combination of the Chi Square test and a Cramer's V test with the answers to questions 3 and 11. Question 3 asks the respondents if they would change their answers to questions 1 and 2 if they knew cast/ replica was being



used. Question 11 asks if the respondent thought that museums needed to change their display techniques. The Chi Square test will be used to identify if the data has any correlation and then the Cramer's V test will be used to determine how strong the correlation between the data sets is.

As the last part of the compilation and quantification of the data, each question will be inspected for free word answers, or answers that were given by respondents outside of the offered scale of answers. Categories were constructed based on the answers given using a thematic analysis done after reviewing the answers given by respondents. These answers will be separated into categories of topic that are as follows:

**Familiarity/Frequency:** Answers that mention a comfortable familiarity or frequency in viewing remains creating comfort with the remains

**Creepy/Gross:** Answers that describe discomfort in the forms of nausea and off-putting physical attributes that makes the respondent frightened in any degree

**Education/Science Potential:** Answers that focus on the educational aspect of remains or the potential for research/study of the remains and their cultures

**Fascinating/"Cool":** Answers that mention an interest in remains or use the word "Cool" as a descriptor for the remains

**Consent:** Answers that bring up issues involving the consent of displayed remains or the consent of relatives, cultures, or descendants

**No Issue:** Answers that give none of the above, and do not mention any issues or positives the respondent has with remains.

The previous categories are the same for questions 1 through 10.

Question 11, due to the nature of the questions being suggestion based, will have the categories of the following:

**Consent:** Answers that suggest a need for visible consent in displays, or where the consent is explicitly gained from the deceased, relatives, cultures, or descendants.

**Replicas:** Answers that suggest the use of replicas in place of remains

**More Information:** Suggestions for the display of extra information about the remains in life as well as the culture they represented, if applicable.

**Other:** Suggestions that do not fit into the previous categories but are still relevant suggestions.

## Results

### Combined Data Set.

The complete survey set consists of ninety-nine surveys completed and returned for the completion of this research. Table 1 through Table 3 show the combined answers of all surveys collected for analysis.

	Very Comfortable	Comfortable	Neutral	Uncomfortable	Very Uncomfortable	Other
<b>Question 1 (Skeletons)</b>	17	37	38	5	1	1
<b>Question 2 (Human Organs/Tissue)</b>	8	22	37	25	5	2
<b>Question 4 (Mummies)</b>	17	36	31	11	4	0
<b>Question 5 (Photographs or drawings)</b>	32	36	29	1	1	0

Table 1: All Responses: Questions 1, 2, 4, 5. Number of responses per category.

	Yes	No	Other
<b>Question 3 (Answer Change depending on cast/model)</b>	42	57	0
<b>Question 10 (Answer Change with consent)</b>	51	48	0
<b>Question 11 (Suggestions for display methods change)</b>	44	47	8

Table 2: All Responses: Questions 3, 10, 11. Number of responses

	Disrespectful	Respectful	Other
<b>Question 8 (Display of human remains to the deceased)</b>	23	68	8
<b>Question 9 (Display of human remains to the viewer)</b>	7	85	7

Table 15: All Responses: Question 8 & 9. Number of responses per

Question 1 has the “Neutral” category as the most common answer, with 38 out of 99 (38.4%). The “Comfortable” category is the second most popular answer with one less response in that category. Question 2, relating to the display of preserved organs and tissues, has the

largest portion of answers in the “Neutral” category with 37.37% of the answers. Questions 4 and 5 both have “Comfortable” as their top category with 36 answers for that category (36.4%). On table 2, question 3 has 57 answers of the respondents against changing their answers depending on if the skeletons and tissues (described in Question 1) were casts or models, while the opposing answer of “Yes” received 42 answers. Question 10 has a majority of answers (51.51% or 51 answers) in the category where their answers would change if they knew explicit consent was given by the human remains while living. 47 respondents replied that they had no suggestions for museums or other methods of displaying human remains. 44 answers were the opposite while 8 survey takers chose to not answer or give a different answer. The majority answers for both questions 8 and 9 are in the “Respectful” category, with 68.68% for Question 8 and 85.85% for question 9.

## Data Set 1

Data set 1 consisted of the most responses out of the four data sets. Forty-six surveys were completed and returned to be analyzed. The answers for each of the questions are provided in Tables 4 through 6.

	<b>Very Comfortable</b>	<b>Comfortable</b>	<b>Neutral</b>	<b>Uncomfortable</b>	<b>Very Uncomfortable</b>	<b>Other</b>
<b>Question 1 (Skeletons)</b>	4	17	23	1	0	1
<b>Question 2 (Human Organs/Tissue)</b>	3	7	21	12	3	0
<b>Question 4 (Mummies)</b>	5	18	18	4	1	0
<b>Question 5 (Photographs or drawings)</b>	12	16	17	0	1	0

Table 4: Data Set 1: Questions 1, 2, 4, 5. Number of responses per category.

	Yes	No	Other
Question 3 (Answer Change depending on cast/model)	16	30	0
Question 10 (Answer Change with consent)	24	22	0
Question 11 (Suggestions for display methods change)	14	26	6
Question 9 (Display of human remains to the viewer)	3	37	6

In table 3, each category has a different distribution of answers, however all questions show a consensus that the most common answer was a neutral response to the various types of displays of human remains, except Question 4. Question 1 does not have a majority in the neutral category, however the category does have the largest percentage of answers at 50% exactly. Question 2, about organs, and Question 5, about photographs/drawings, have a “Neutral” percentage of 46.7% and 36.9% respectively. In Question 4, there is a tie between respondents being comfortable (39.1%) and being neutral (39.1%) with mummies.

In table 2, Question 3 shows the respondents would not change their answers to questions 1 and 2 if they knew that the body or organs they were viewing were casts or models, with 62.2% of respondents answering “No” compared to the 34.8% who answered “Yes”.

Table 6 shows the number of answers per category for Questions 8 and 9. These questions both have the majority of their answers in the “Respectful” category (58.70% and 80.43% respectively). These relate to Question 10 (Table 5) which shows that if the respondents knew that implicit consent from the deceased was given while they were

alive, a majority (52.2%) would change the answers to questions 8 and 9. The final question of the survey is Question 11, which asked if the respondent had any ideas on how to change the display methods of the human remains. The majority answered that they did not, at 56.5%.

Out of the respondents that answered “Yes”, there were fourteen separate free form answers that were given. These answers were separated into four categories (Consent, Replicas, More Information, Other). Six answers suggested that the consent of the human remains be displayed, one respondent suggested that replicas be used as opposed to real remains, four answers referred to the need for more information on the lives of those whose remains are being displayed, and 3 respondents were classified by the “Other” category.

## Data Set 2

Data set 2 consisted of twenty-eight surveys, each of which provided answers to all of the questions provided. The answers for each of the questions are provided in Tables 7 through 9.

	<b>Very Comfortable</b>	<b>Comfortable</b>	<b>Neutral</b>	<b>Uncomfortable</b>	<b>Very Uncomfortable</b>	<b>Other</b>
<b>Question 1 (Skeletons)</b>	10	10	8	0	0	0
<b>Question 2 (Human Organs/Tissue)</b>	3	7	13	4	0	1
<b>Question 4 (Mummies)</b>	9	8	10	1	0	0
<b>Question 5 (Photographs or drawings)</b>	10	9	9	0	0	0

Table 7: Data Set 2: Questions 1, 2, 4, 5. Number of responses per category.

	<b>Disrespectful</b>	<b>Respectful</b>	<b>Other</b>
<b>Question 8 (Display of human remains to the deceased)</b>	2	25	1
<b>Question 9 (Display of human remains to the viewer)</b>	1	27	0

Table 8: Data Set 2: Questions 3, 10, 11. Number of responses per

	Yes	No	Other
<b>Question 3 (Answer Change depending on cast/model)</b>	12	16	0
<b>Question 10 (Answer Change with consent)</b>	10	18	0
<b>Question 11 (Suggestions for display methods change)</b>	11	15	2

Table 9: Data Set 2: Questions 8 & 9. Number of responses per

Questions 1 and 5 both have the highest concentration of answers in the “Very Comfortable” category. This category is tied with the “Comfortable” category for Question 1, both having ten out of the possible twenty-eight answers (36%). These questions dealt with skeletons and photographs or drawings of human remains. The other two questions in Table 4, Question 2 and 4, have the highest concentration of answers in the “Neutral” category with 46.4% and 35.7% of answers respectively. Table 8 shows the answers as being mostly “No” to all questions (57.1% for Question 3, 64.3% in Question 10, and 53.6% Question 11), in asking if the respondents would change their answers, or if they had any suggestions on how to change museum display methods. The majority of the answers for Questions 8 and 9 are that the display of human remains is respectful to both sides (viewer and deceased). These answers are a very firm majority with Question 8 having “Respectful” as 89.3% of the answers and Question 9 having the same choice for 96.4% of the answers. The 11 free form suggestions consisted of 6 suggestions for added consent labeling, 2 suggestions for more information about the remains as people, and 3 suggestions in the “Other” category.

## Data Set 3

Data Set 3 consisted of twelve completed surveys, the lowest number of responses out of the four data sets.

	Very Comfortable	Comfortable	Neutral	Uncomfortable	Very Uncomfortable	Other
<b>Question 1 (Skeletons)</b>	3	7	2	0	0	0
<b>Question 2 (Human Organs/Tissue)</b>	2	4	1	3	1	1
<b>Question 4 (Mummies)</b>	3	7	1	1	0	0
<b>Question 5 (Photographs or drawings)</b>	7	5	0	0	0	0

Table 10: Data Set 3: Questions 1, 2, 4, 5. Number of Responses per Category

	Disrespectful	Respectful	Other
<b>Question 8 (Display of human remains to the deceased)</b>	2	9	1
<b>Question 9 (Display of human remains to the viewer)</b>	0	12	0

Table 11: Data Set 3: Questions 8 & 9. Number of Responses per Category

	Yes	No	Other
<b>Question 3 (Answer Change depending on cast/model)</b>	5	7	0
<b>Question 10 (Answer Change with consent)</b>	6	6	0
<b>Question 11 (Suggestions for display methods change)</b>	6	6	0

Table 12: Data Set 3: Questions 3, 10, 11. Number of Responses per Category

Due to the low number of respondents in Data Set 3, the majorities in several questions are close to the next most popular answer. The trend for Table 7 is for “Comfortable” and “Very Comfortable”. Question 1 has a bare majority of answers in the “Comfortable” category with 7 out of 12 respondents choosing that answer. Question 4 has the same percentage in the “Comfortable” category, at 58.3%. Question 2 has no majority, however



the “Comfortable” category has the most responses with 4, which is 33.3% of the answers for that question. Question 5 shows that the respondents are “Very Comfortable” with photographs and drawings of human remains with 58.3% of the answers being in that category. That question also has no answers in the “Neutral”, “Uncomfortable”, or “Very Uncomfortable” category.

The questions with Yes/No/Other answers (Questions 10 and 11) were divided almost equally between “Yes” and “No”, with 6 answers in one category and 6 answers in the other. The exception to this is Question 3, where the answers are 41.7% for the respondent would change their answers (“Yes”) and 59.3% for the respondent would *not* change their answers (“No”). The free form suggestions from Question 11 are also divided equally. Three of the suggestions focus on consent for the human remains to be displayed, and another three are in the “Other” category. Table 9 shows the answers for Question 8 and 9. Question 8 has a majority of the answers being that the respondents see the display of human remains to the deceased and to the viewer of the human remains as “Respectful” with 75% of the answers. In Question 9, all twelve surveys had the “Respectful” category selected.

## Data Set 4

This data set consists of thirteen completed surveys. Their answers are listed in tables 13 through 15.

	Very Comfortable	Comfortable	Neutral	Uncomfortable	Very Uncomfortable	Other
<b>Question 1 (Skeletons)</b>	0	3	5	4	1	0
<b>Question 2 (Human Organs/Tissue)</b>	0	4	2	6	1	0
<b>Question 4 (Mummies)</b>	0	3	2	5	3	0
<b>Question 5 (Photographs or drawings)</b>	3	7	2	1	0	0

Table 13: Data Set 4: Questions 1, 2, 4, 5. Number of Responses per Category

	Yes	No	Other
<b>Question 3 (Answer Change depending on cast/model)</b>	9	4	0
<b>Question 10 (Answer Change with consent)</b>	11	2	0
<b>Question 11 (Suggestions for display methods change)</b>	13	0	0

Table 15: Data Set 4: Questions 3, 10, 11: Number of Responses

Question 1 is the only question in this data set with “Neutral” as the category with the most answers at 38.5% of responses with “Uncomfortable” being the second most popular answer with 30.8%. Questions 2 and 4 both show the most popular answers being “Uncomfortable” by a small margin. “Uncomfortable” in Question 2 has a percentage of 46.2%. The same category in Question 4 has 38.5%. Question 5 has a positive answer, with a majority (53.8%) in the “Comfortable” category. Table 11 shows the answers for Question 3, 10, and 11 as having a majority of “Yes” answers in all questions. Question 3 has a majority of 69.2%, and Question 10 has a majority at 84.6%. Question 11 has a unanimous majority with 100% of the answers being in the yes category. All 13 survey takers had suggestions for museums to possibly change their display methods with human remains. Nine of the suggestions dealt with consent or information about consent for the public. Two suggestions are for more information about the deceased and the final suggestion is in the “Other” category. Table 12 completes Data Set 4 showing the split between the “Yes” and “No” answers with both Questions 8 and 9 having a majority answer of “Respectful” with 53.8% and 69.2% respectively.

## Written/Free Form Answers

Table 16 through Table 19 show the answers respondents gave, placed into six different categories, in addition to circling the answers for questions 1, 2, 4, and 5. Question 1 received 32 additional answers, question 2 received 35, question 4 had 33, and question 5 received 22 supplemental answers.

<b>Question 1 (Skeletons)</b>	
Familiarity/Frequency	3
Creepy/Gross	1
Education/Science Potential	9
Fascinating/"Cool"	8
No Issue	5
Consent	6

Table 16: Question 1 Written Answers

<b>Question 2 (Human Organs/Tissue)</b>	
Familiarity/Frequency	2
Creepy/Gross	14
Education/Science Potential	5
Fascinating/"Cool"	3
No Issue	6
Consent	5

Table 17: Question 2 Written Answers Categories

<b>Question 4 (Mummies)</b>	
Familiarity/Frequency	3
Creepy/Gross	3
Education/Science Potential	4
Fascinating/"Cool"	13
No Issue	5
Consent	5

Table 18: Question 4 Written Answers

<b>Question 5 (Photographs or drawings)</b>	
Familiarity/Frequency	0
Creepy/Gross	1
Education/Science Potential	3
Fascinating/"Cool"	4
No Issue	13
Consent	1

Table 19: Question 5 Written Answers

For question 1, in relation to the display of skeletons, 9 respondents wrote supplemental explanations that fit into the category of "Education/Science Potential". The second most populated category of "Fascinating/Cool" received 8 answers. In the supplemental explanations for question 2, 40% (14 answers) of respondents found human organs/tissues "Creepy/Gross". Question 4's additional explanations included 13 responses that involve "No Issue" with a photograph or drawing of human remains.

The respondents gave 41 free-form suggestions for Question 11. 58.54% (24 out of 41) of the suggestions involved the addition of "Consent". 1 of the respondents suggested an

answer in the “Replica” category. 19.51% of the answers are both in the “More information” and the “Other” categories.

## Answers to Statistical Questions

“Are the respondents more uncomfortable with three dimensional remains, qualified as skeletons, mummies, organs or tissues, than they are with two dimensional remains, photographs or drawings?”

The Spearman’s Correlation tests revealed similar answers for each of the three tests run. The first test compared the answers from Question 1 (How does the display of preserved skeletons make you feel?) to those of Question 5 (How do photographs or hand drawings of human remains make you feel?). This test concluded with a result of  $r=0.99915$ . The following tests compared Question 2 (How does the display of preserved human organs and tissue make you feel?) to Question 5 and Question 4 (How does the display of mummies make you feel?) to Question 5. The second test had a result of  $r=0.99745$ . The third run of the Spearman Correlation had the result of  $r=0.99703$ .

“How do the answers between the museum studies students, (Data Set 4), compare to those of the undergraduate students (Data sets 1-3)?”

The Mann Whitney test revealed four separate U values for the four tests done in comparing the answers of Questions 1, 2, 4, and 5 between the data set of compiled undergraduate student answers and the set of graduate student answers. Question 1 Mann Whitney test revealed a U value of 245.5,  $p=0.001$ . The Question 2 test had a U value of 438,  $p=0.191$ .  $U=222$ ,  $p=0.00$  for Question 4. The Question 5 Mann Whitney test revealed a U of 542,  $p=0.852$ .

“Is there any correlation between those who prefer the use of casts and replicas to those that think museums should change how they display remains?”

The Chi-Square test revealed a p-value of 0.078. This means that the answers between the two populations have no correlation. This deems the Cramer’s V test unnecessary.

## Discussion

The collected data shows a neutral/comfortable split between the answers that were given for questions 1, 2, 4, and 5. While there is no true majority answer in any of the four questions, they do show how the highest concentration of respondents felt about their respective questions. Question 1, in reference to how the respondents felt about skeletons, has 38.38% of the respondents having “neutral” feelings, with “comfortable” having 37.37% of the answers. This pattern is shown through each individual data set as well (Data set 1: 50.00% Neutral, Data Set 2: 35.71% Very Comfortable/Comfortable, Data Set 3: 58.33% Comfortable, Data Set 4: 38.46% Neutral). A neutral/comfortable feeling towards the display of skeletons could come from a number of prior experiences that the respondents have had. Skeletons have become less of something that relates to human remains and death in the past years, instead becoming a part of popular culture. Skeletons are seen on popular television and in kids’ cartoons. They are often parts of costumes for Halloween. This exposure could lead to a more comfortable stance when it comes to viewing skeletal remains. Exposure such as this started in the Middle Ages, when the bones of kings and saints were displayed, as some still are today. An article in *Time* on the use of bones as Halloween decorations states “...apparent to medieval men and women would have been the sophisticated range of ways one could approach bones: fearful yes, but also respectful, hopeful, even playful — much like our Halloween decorations today” (Hartnell, 2019). Even National Geographic has their own articles on “celebrity” fossils and skeletons and what they mean for humanity (Worall, 2016). Popular culture makes skeletons more familiar and, possibly, exciting. Meanwhile, the relation of skeletons from school courses could balance out the excitement. While learning basic human anatomy in most schools, students are usually shown parts of a human skeleton. While this does not have any specific negative or positive connotation, it does add another aspect of life where skeletons are seen by the public. Specifically, this educational aspect can be seen through the explanatory “free-form” answers. Out of the 32 responses received, 28.13% fell into the “Education/Science Potential” category, with the runner up having 25.00% in the “Fascinating/Cool” category.

Question 2 relates to the display of organ or “wet specimens”, meaning tissues and organs displayed in preservation fluids. When it comes to skeletons and organs, there is always a part of the display that look irrevocably human. The answers to this question veer away from the comfortable side of the spectrum of answers in three of the four of the data sets (Data Set 1: 45.65% Neutral, Data Set 2: 46.43% Neutral, Data Set 3: 33.33% Comfortable, Data Set 4: 46.15% Uncomfortable). The category with the highest number of respondents overall is the “Neutral” category with 37 out of the 99 respondents choosing that category. Data Set 3 is the only dataset that displays a comfortable stance with organs/tissues. This could be because of what this course was. These respondents are in a 300 level course named “Bioarcheology” so they would have an even more specialized set of knowledge about human remains and how they are viewed. This is mainly a biological anthropology majors focused course. Therefore, the respondents have a further understanding of the scientific side of anthropology. This could mean that the respondents have a higher tolerance to the display of human remains and their various dissections/preparations, leading to a more comfortable view of human organs and wet specimens. However, the rest of the data does not agree with data set 3 and sits in the “Neutral”/“Uncomfortable” categories. Data set 4, specifically, has the highest concentration in the “Uncomfortable” category. The respondents in data set 4 are the Museum Studies Master’s degree students who have become part of a community with strong feelings towards the display of human remains due to discourse within various classes and within the program’s community. Outside of these data sets, unless a person has a background in medicine or anatomy, the only time human organs and internal tissues are seen is when there is a large problem. This could make the respondents relate danger or a major medical issue to the sight of organs and tissues. The respondents’ explanatory answers reflect this as well by choosing to write about how organs and tissues are “Creepy/Gross” more than any of the other categories (40.00%). A positive aspect of seeing organs would be loosely related to organ donation, where organs could be used to save a life. DonateLife America, one of the well-known organ donation registries, counted approximately 60% of American adults as donors as of their 2019 Annual Report (DonateLife, 2019).

While the highest concentration of answers from Questions 1 and 2 are “Neutral” (38.38% and 37.37% respectively), the majority answer to Question 3, asking if the respondents would change their answers knowing that the displayed remains were casts or replicas, was “No”. There are no explanations alongside the answers for Question 3, so whether the answers would change for the better or for the worse for those who chose “Yes” if it was revealed that the remains displayed were models or casts is unknown. The second highest answers for questions 1 and 2 are “Comfortable” (37.37%) and “Uncomfortable” (25.25%) respectively. Question 1 displays answers that are on the “positive” side of the spectrum and a lack of change of answers makes sense. For Question 2, the discomfort with the display of human organs/tissues does not reflect the lack of change that the responses preferred.

Question 4 involved the display of mummified remains, just called “mummies” in the survey. 36.36% of the surveys were in the “Comfortable” category. There could be several reasons for this, depending on the student who was taking the survey. Starting in grade three, students in New York, and other states, are taught about Egypt and their artifacts, including mummies. This teaching continues into grade six (WeTeachNY, 2020). Since the respondents had a familiarity with mummified remains from a young age, this could make them more comfortable around the display of mummified remains in adulthood. Another reason could be that a number of larger history museums have access to mummified remains from several regions of the world that utilized this burial technique. In general, people are more used to seeing mummies through schooling, popular culture, and in a museum setting. In 2017, *The Atlantic* ran an article called “Your Bodies Live on Without You” that touched on the permanence of human bones and the impermanence of life where the author offered the following insight: “As an archaeologist excavating burials, I’ve felt connected to another person—separated by centuries of time—by touching their remains. I’ve observed how exhibits of Egyptian mummies... inspire wonder for others” (Colwell, 2017). While the strips of cloth used to wrap a mummy often hide the features of a mummy that makes it look human, there is mysticism that attracts people to them nonetheless. Human mummies obtain their humanoid shape but otherwise are hidden from view by the means of which they are prepared. This obstruction could make viewers see the mummy as less than human and therefore something that is

easier to look at. Finally, popular culture has turned mummies into a fun Halloween costume or a child's cartoon character that is not to be feared. Within the other data sets (Data Set 1: 36.96% Neutral, Data Set 2: 35.71% Very Comfortable, Data Set 3: 58.33% Very Comfortable, Data Set 4: 53.85% Comfortable), there is a positive consensus with the exclusion of Data set 1. This is not given an explanation in the free form answers, although it could be a result of the wider population base. Data Set 1 is from the "Introduction to Cultural Anthropology" course mandatory to all Anthropology majors at SUNY Oneonta. These students have yet to have any specialty and could have a wider variety of feelings about mummies than the respondents in other data sets. The explanatory free-form answers to Question 4 involved 39.39% of respondents' answers falling into the "Fascinating/Cool" category. The next most popular areas were "No Issue" and "Consent" both with 15.15% of answers. The 5 answers that contributed to the "Consent" category come from Data Set 4 for a similar reason as mentioned in the discussion of Question 2.

The answers for Question 5 were on the positive/neutral side of the spectrum of answers for each data set (Data Set 1: 36.96% Neutral, Data Set 2: 35.71% Very Comfortable, Data Set 3: 58.33% Very Comfortable, Data Set 4: 53.85% Comfortable). Data Set 1 has 45 out of the 46 answers on this "positive" side of the spectrum of answers, while 1 respondent was "Very Uncomfortable" with the display of photographs and/or drawings of human remains. Moving from the 3-dimensional displays of human remains to the display of 2-dimensional remains shows a shift to a more comfortable stance from the respondents. 59.09% of the free-form answers fall under the category of having "No Issue" with photographs or drawings of human remains. This could be because of a disconnect due to the remains being on paper as opposed to being in front of a person in a fully physical form. "... to look upon a photograph is not the same as 'really' seeing something" John Harries et al. wrote in their 2018 paper "Exposure: the ethics of making, sharing and displaying photographs of human remains". "This play of distance and proximity, intimacy and detachment, hints at a certain ambivalence concerning photography and its relationship between the photograph and the thing (or person) photographed" (Harries et al, 2018). This disconnect could make people more comfortable with photographs or two dimensional displays of human remains.



When the two types of displays (3-D versus 2-D) were compared with a Spearman's Rank Correlation test, the answers the test gave indicated a positive correlation between the feelings the respondents chose for questions 1, 2, and 4 and the feelings for question 5. The way that the answers for these tests were ranked was meant to show that as respondents got more uncomfortable with the 3 dimensional remains they would get more comfortable with 2 dimensional remains (photographs/drawings). This positive correlation means that as the respondents to questions 1, 2, and 4 got more uncomfortable as the respondents to question 5 got more comfortable. This does reflect the positive answers given in response to this question ("Very Comfortable" and "Comfortable" add up to 68.68% of answers), while the previous questions have more answers in the negative side of the answer spectrum.

Questions 8 and 9 reveal that the respondents did not have any issue with having human remains displayed in museums in terms of respect. Both questions have a greater majority in the "Respectful" category of the answer choices. Question 8 (How do you believe the display of human remains in museums is to the deceased?) has 68.68% of the answers as "Respectful" while Question 9 (How do you believe the display of human remains in museums is to the viewer?) has 85.85% in the same category. There are no explanations that were written for the answers, although they were suggested in the survey. These answers could be reflective of a need for consent, which was one of the many suggestions for changes museums should make in the display of human remains at the end of the survey. The answers to question 9 could have a basis in the free will of the living. If a visitor were to go to a museum or exhibition where there are human remains on display, the visitor can make a choice to not view the remains. The human remains do not have such a choice.

Question 10 is based on the respondents answers to questions 8 and 9 and if their answers would change depending on if they knew that consent was explicitly given by the deceased who was on display. The "Yes" category barely gets a majority with 51.51% of the answers. This is a point of contention among museums, especially with older remains where consent is impossible to get from the deceased, and in some cases their cultures. Colwell, the same anthropologist who wrote "Your Bodies Live on Without You", wrote in

a different article the same year “When controversies erupt over exhibiting the dead, it’s likely because an institution has violated one or more of these concerns (how remains were collected and their connection to living people today)” (Colwell, 2017). This leads to the final question of the survey, which asks the survey taker if they believe museums should change how they display human remains and if so, how. In opposition to the previous question, 47.47% of respondents answered that they did not believe museums have anything they should change when it comes to the display of human remains. This final answer fits in with the neutral feelings that the rest of the questions displayed through their answers. With the 44 respondents that answered in favor of change, there were 41 suggestions for what museums could do. The majority of the suggestions (58.54%) fell into the category of “Consent”. With the rise of consent-positive movements, such as the Me-Too movement (which deals with sexual harassment by the living to the living), there is also an increase in discourse in the museum community about the same. The commodification of human remains has been an aspect of society since early trades of human remains were done for 19<sup>th</sup> century medical colleges. However, recently, this has become a choice by the alive and the dying.

“Although whole body donation rates remain low worldwide, the international success of Gunther von Hagens’ ‘Body Worlds’ exhibitions attests to the desire that thousands of people continue to have to be made ‘useful’ after death, even if this use-value involves some of the same elements of mobility and display that are attached to [John] Parker’s skull” (McCorristine, 2015)

McCorristine’s “The Dark Value of Criminal Bodies: Context, Consent, and the Disturbing Sale of John Parker’s Skull” focuses on the history of the buying, selling, and trading of the remains of executed criminals. While there is still a need for these cadavers, modern times has made the dissection and anatomization of a corpse the corpse’s choice. Along with the need for consent, another suggestion involved adding more information about the deceased, whether that be name, age, or other biographical information. A full list of suggestions will be provided in Appendix II.

Question 11 asks the respondents if they feel that museums should change. Question 3 asks respondents whether they would change their feelings about skeletons and organs if they knew they were casts or replicas. These two questions could be connected in the way that if someone preferred casts and replicas, they might want museums to change to using those as opposed to the real skeletons and organs. The lack of correlation between the two questions could be understood as the respondents thinking that museums should change has no connection to their thoughts and feelings about how human remains are displayed. This is also supported by the amount of suggestions from Question 11 that involve replicas, which is 2.44% (1 answer)

The final statistical question to answer was “How do the answers between the museum studies students, (Data Set 4), compare to those of the undergraduate students (Data sets 1-3)?”. This is a slightly vague question that was answered through the use of a series of Mann Whitney U tests. Comparisons would be done to discover any general correlations between the two populations. Two of the four tests revealed a significant connection between the Graduate and the Undergraduate student answers. The answers for Questions 1 and 4, which relate to skeletons and mummies respectively, each have a p-value of less than 0.05 ( $p = .001$  and  $p = 0$ ). These are the two questions where the answers were more often positive than negative. This significance means that both graduate students and undergraduate students agree with each other in terms of their thoughts on skeletons and mummies. In contrast Question 2 (organs/tissues) and Question 5 (photographs/drawings) have p values of 0.191 and 0.852 which are greater than 0.05. These questions have no significant connection between the two collegiate levels. Again, this relates to the thoughts of the respective classes interviewed and the thoughts and discourse amid the graduate level students that have been discussed previously.

## Conclusion

The purpose of this survey and subsequent research was to discover how the average visitor would feel about the display of human remains in a museum setting. By doing so, the hope was to gain insight into how museums should proceed in the future with their exhibitions. This has been done with the ninety-nine individuals who voluntarily completed the survey. The research was not any specific exhibition evaluation but a collection of personal feelings. The groups selected to take the survey were chosen for their background in anthropology or their prior knowledge about museums. In the future it would be better to reduce biases by having a wider and more general population to choose from. The respondents, while cooperative and forthcoming with their answers, do not represent a full scope of demographics when it pertains to museum visitors. Future research would need to be done with a wider population, with either one large data set group or several (still larger) data sets in order to make sure any differences were statistically significant. This theoretical research should be done to a population of museum visitors, perhaps outside of a museum or in tandem with a museums' exhibition department in order to expand the knowledge of that department's evaluation system.

The collected data reveals an answer that was unexpected. Overall, the ninety-nine respondents do not have strong negative, or strong positive, feelings towards the display of human remains in the ways described by the survey. Most feelings are neutral. Suggestions for museum professionals are veering towards more information about the deceased to be displayed with remains, whether that includes further research or just a name, would be up to the exhibiting institution. The suggestions also included making sure consent is gathered from the family or the deceased of any exhibited human remains. This could be difficult due to the age of the remains or the culture that the remains might have belonged to. Many remains in museums are from cultures that have fallen to history, are too remote to have extensive data on, or are not researched well enough to give the culture and remains justice. These suggestions are an open letter to any museum that wishes to heed their advice. This is only a small number of answers in the scheme of how many people visit museums on a yearly basis. In order for this data to be significant, there

must be a larger population of respondents of all demographics. This research should be continued in the future in order to provide a more cohesive view of the scope of museum audience thoughts on the display of human remains in museums.

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## Appendix I: Survey

These questions relate to ongoing research for a graduate thesis. Please answer the questions truthfully and to the best of your ability. The following questions relate to the display of human remains. Please answer as many you feel comfortable answering. Thank you.

1. How does the display of preserved skeletons make you feel? Circle and explain in a few words.

Very Comfortable    Comfortable    Neutral    Uncomfortable    Very Uncomfortable

2. How does the display of preserved human organs and tissue make you feel? Circle and explain in a few words.

Very Comfortable    Comfortable    Neutral    Uncomfortable    Very Uncomfortable

3. Would your answers to the first 2 questions change if you knew the body was a cast or model?

Yes

No

4. How does the display of mummies make you feel? Circle and explain in a few words.

Very Comfortable    Comfortable    Neutral    Uncomfortable    Very Uncomfortable

5. How do photographs or hand drawings of human remains make you feel? Circle and explain in a few words.

Very Comfortable    Comfortable    Neutral    Uncomfortable    Very Uncomfortable

6. How do you feel about the display of human remains from those with visible disabilities such as elephantiasis, dwarfism, “conjoined twins” etc?

7. How much do you know about how human bodies are displayed and treated in exhibitions, such as within a museum?

8. How do you believe the display of human remains in museums is to the deceased?

Circle one.

Respectful

Disrespectful

8a: Explain why in a few words:

9. How do you believe the display of human remains in museums is to the viewer?

Respectful

Disrespectful

9a: Explain why in a few words:

10. Would your answers to the previous 2 questions change if you knew that, in life, the person gave their consent to the display of their organs and skeletal structure?

Yes

No

11. Is there anything you would change to make the display of human remains more respectful or ethical?

Yes

No

11a. Explain why in a few words:

## Appendix II: Survey Suggestions

### Data Set 1

(1.02) Display replicas/ photographs instead

(1.10) I suppose knowing someone gave consent – but that's obviously not a possibility for remains like mummies etc.

(1.11) I suppose knowing someone gave consent – but that's obviously not a possibility for remains like mummies etc.

(1.12) Make sure that person is okay with it

(1.15) Trigger warnings for audience, maybe display in a more intimate setting, (small room separate from the rest of space)

(1.16) Don't steal from other cultures

(1.23) Make sure their displayed correctly and how they should be

(1.24) consent is necessary

(1.25) Give more background on each display to give a sense of the humans' pride

(1.26) always having a persons consent

(1.27) If a biography about their life is known, have a little history for them

(1.29) make sure the person gives consent or cultural background is given on very old bodies that consent wasn't a thing for

(1.33) make a way to if people didn't want to see it they could avoid seeing it

(1.37) making it mandatory for while they are alive they give consent for their display

(1.43) I guess add their consent to the exhibit so people know it's okay

## Data Set 2

(2.02) Maintain/keeping a connection to the systems that respectfully allow these processes to occur in order

(2.04) To me, bones are bones, but make the option to donate to museums one which more people aware about

(2.11) have full consent if possible

(2.12) I'm sure there are ways. I guess getting a clear guideline for consent would be more ethical

(2.14) if full consent + statement of permission is posted

(2.15) show the written consent form from when there were living next to the display

(2.17) consent must be used in all cases, humans should not be displayed as oddities like they used to be, used more as scientific example than a "shock factor"

(2.18) make it a story about them, their lives, not just an exhibit of their body/organs. Make it more personal to them and to the viewers

(2.19) Vigorous procedures such as interviews and surveys with underlying tones of compassion can prevent ethical or moral questionability. Advance directives can help with this as well

(2.24) If they were mummies from another nation's culture I would say get permission and to treat the remains with as much respect as possible

(2.27) known consent to viewer when looking at display

(2.28) maybe list their name or say that they were okay with this. I think also there should be warnings if it is graphic

### Data Set 3

(3.01) Those of indigenous peoples or those with visible disabilities are not always portrayed in a good light. Things have improved in modern times

(3.02) If there is a population of their “tribe” etc., it needs to be discussed legally with them. Whether or not they want “ownership” of the body

(3.05) guidelines to be set so that nothing is offensive

(3.08) Make sure permission is granted

(3.10) ask those people whose ancestors are displayed think moral over education always

(3.11) Personal consent and family consent

### Data Set 4

(4.01) Make consent clearer and set up standards for how human remains are handled

(4.02) More info about how remains were obtained

(4.03) Require agreement of human (when alive) or ancestral people alive to display body

(4.04) Making a note that all the people save consent that their remains were shown that the viewers are aware they are about to view human remains

(4.05) Always consent/less commodification

(4.06) Explain process of consent

(4.07) Make sure consent is given in life and the context of display is not demeaning or (toonening)?

(4.08) Make sure there is consent if the human is recently deceased

(4.09) More legal safeguards and policies created to return illegally or questionably obtained bodies

(4.10) discussion in exhibit about consent and educational use of bodies

(4.11) only use bodies that gave consent in life

(4.12) Explicit consent. Acknowledging past wrong displays