

**ART CONSERVATION IN CULTURAL INSTITUTIONS IN PUERTO RICO
AND THE VIRGIN ISLANDS: DAMAGE PREVENTION FROM NATURAL
DISASTERS**

by

Yulimar Luna Colón

A thesis submitted to the Faculty of the University of Delaware in partial fulfillment
of the requirements for the degree of Art Conservation and Art History with
Distinction

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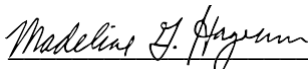
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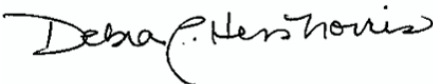
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ABSTRACT

This undergraduate thesis serves as the final requirement to complete a Bachelor's in Art Conservation and Art History at the University of Delaware. The research done both through literature review and through a short survey will serve as a resource for rising conservation professionals in the area of colonial Puerto Rico and the Virgin Islands. This research strives to shed a clear understanding of the art conservation practice in cultural institutions of not only Puerto Rico--but the Virgin Islands as well; in hopes to cover a good portion of the Caribbean. The absence of literature on the preservation of cultural heritage in the Caribbean has affected the understanding and knowledge of how conservation is approached and practiced in a colonial entity that does not count with its own funding and in a geographical location that is affected by numerous annual natural disasters. Finally, this research may be one of the starting points in the development of a code of ethics for the practice of conservation and preservation of culture in the area of the Caribbean.

Cultural significance within the field of conservation is getting more recognition with the understanding that there are different cultures all over the world. Treatment and preservation of cultural heritage belonging to different cultures will be approached differently depending on the country in which the practice is employed. The Mainland United States has resources and organizations that support and empower professionals,

institutions, and all those involved in preserving cultural heritage.¹ The Insitute of Puerto Rican Culture and the Oficina Estatal de Conservación Histórica provide resources on the response in case of an emergency as well as reports of the recent damages to cultural institutions by natural disasters.²

The research begins with a brief summary of the nature of art conservation and how it is employed in the mainland United States. The topic then shifts to the history of Art Conservation in Puerto Rico and how the history of the study of material culture could be affected by Puerto Rico’s economic and political status as a colony as well as other places that have the status of a colony of the United States. To understand how institutions are able to run and maintain their collections, this research outlines the types of funding that are offered to the institutions that are common in the United States. To align with the topic which distinguishes all of the Caribbean from other regions in the world, this research also touches on the geographical location of the region and how it is affected by numerous disasters. Finally, this research concludes with the results of a survey that was distributed among all current active institutions of Puerto Rico and the Virgin Islands.

¹ AIC. “AIC/FAIC ABOUT US.” American Institute for Conservation & Foundation for Advancement in Conservation, 2022. <https://www.culturalheritage.org/home>.

² “Historia .” Instituto de Cultura Puertorriquna, 2018. <https://www.icp.pr.gov/historia/>.

Chapter One

HISTORY OF ART CONSERVATION IN PUERTO RICO

1.1 Conservation in the Mainland US

As defined by the American Institute of Conservation (AIC), art conservation is all the actions that work towards the preservation of cultural heritage.³ Art conservation, however, was not always defined or practiced in the same way that it is today. The concepts of restoration and conservation have been a part of the human consciousness for many years.⁴ The first recorded example of a completed restoration comes from a sixth-century BCE cuneiform tablet. The engraved passage stated that King Nabonidus of Babylon (556-539 BCE) had discovered that a statue of Sargon had been damaged. He called upon craftsmen that restored the face of the statue (page 83, David Scott). Examples of the act of restoring an object to its original state resurfaced throughout all of human history.

An example of the first restorations of monuments, as noted by Alois Riegl, took place in the Italian Renaissance.⁵ However, a comprehensive history of restoration does not exist currently. In the past, restorers and conservators did not document their

³ <https://www.culturalheritage.org/about-conservation/what-is-conservation>

⁴ David A. Scott. "Art Restoration and Its Contextualization." *The Journal of Aesthetic Education* 51, no. 2 (2017): 82–104. <https://doi.org/10.5406/jaesteduc.51.2.0082>.

⁵ Alois RIEGL, "Der moderne Denkmalkultus," 1903; reprinted in *Cesammelte Aufsätze* (Augsburg-Vienna: B. Filser, 1929)

findings or write treatment reports.⁶ The addition of documentation during treatments adds to the present-day known definition of conservation. Documentation would provide the field evidence for future conservators to examine if further research is needed. It is also imperative to the lifespan of an object. As the American Institute of Conservation states:

“The conservation professional has an obligation to produce and maintain accurate, complete, and permanent records of examination, sampling, scientific investigation, and treatment. When appropriate, the records should be both written and pictorial. The kind and extent of documentation may vary according to the circumstances, the nature of the object, or whether an individual object or a collection is to be documented.” (AIC, Code of Ethics)

Present-day conservation benefits from two elements that past centuries lacked: technology and scientific understanding. Science began its way into conservation in Britain just after the first World War. As Harold Plenderleith recalls, the British Museum “had its share of restorers on staff but encountered certain challenges of deterioration from which they hired Dr. Alexander Scott along with two other staff members. A necessity of restoring objects in poor condition because of improper storage resulted in using chemistry to understand crystallization and other chemically occurred

⁶ Roger Marijnissen, “Degradation, Conservation, and Restoration of Works of Art: Historical Overview,” *CeROArt*, no. HS (October 2015), <https://doi.org/10.4000/ceroart.4785>.

damages on the objects”.⁷ Plenderleith describes in *A History of Conservation* how the space that had been allotted to the British Museum was not equipped to hold and preserve the objects. This marked the beginning of a scientific approach to conservation that became a part of its definition in the twentieth century. Museums were now spaces for the preservation of cultural heritage.

By the end of the nineteenth century, the United States counted with more knowledge in art conservation. The Institute for the Conservation of Historic and Artistic Works, an international organization, was established in 1950. This institute oversaw conservation practices through training. By this time in history, there was a sudden rise in the amount of paintings and artworks that collectors acquired. These artworks would then need care and examination after the constant handling. The uprising of conservation began to influence the United States. As Professor Joyce Hill Stoner writes in “Changing Approaches to Art Conservation: 1925 to the Present”: in the years between 1925 and 1975:

“Marked a period of pioneering progress and expansion in the field of art conservation in the United States.: Museums established conservation departments and analytical laboratories; the first art technical journals were published; and professional societies and training programs were established.”⁸

⁷ Plenderleith, Harold J. “A History of Conservation.” *Studies in Conservation* 43, no. 3 (1998): 129–43. <http://www.jstor.org/stable/1506740>.

⁸ Stoner, H. Joyce. *Changing Approaches in Art Conservation: 1925 to the Present*. Winterthur Museum, pp. 40-56.

In the early stages of conservation, apprenticeships were very common in the training of professionals. Apprenticeships would consist of extensive years of practice in conservation or in private practice. With the addition of more technical and scientific advances in the field, it was becoming more common for aspiring conservators to pursue a masters degree. By the 1950s, individuals that pursued a masters would have completed undergraduate studies in similar fields such as fine arts, art history, and/or archaeology.⁹ Graduate-level programs in art conservation were first established in the United States during the 1960s and the number of individuals that studied to pursue a master's degree completed the proper prerequisites as undergraduate programs in museums studies, chemistry, and conservation were more common. Today, more than two-thirds of practicing conservators have a master's degree; most work placements for conservators require a graduate degree in conservation or equivalent.¹⁰ There are six art conservation programs at graduate level in North America: the Art Conservation Department at the State University of New York College at Buffalo; the Conservation Center of the Institute of Fine Arts, New York University; the Winterthur/ University of Delaware Program in Art Conservation (WUDPAC); The UCLA-Getty Conservation

⁹ Mercado Oliveras, Verónica. “ History of Ponce Art Museum’s Anton J. Konrad Conservation Center Until 1985,” 2018.

¹⁰ UCLA-Getty "Become a Conservator" in AIC. Accessed February 4, 2022. <http://www.conservation-us.org/jobs/become-a-32-conservator#.WpHIVROCzBI>.

Institute in Los Angeles; and Queens Art Conservation Program in Ontario, Canada; and the Escuela Nacional de Conservación, Restauración, y Museografía in México.¹¹

The conservation training that is offered by the graduate-level programs in the field set the blueprint for the approaches in conservation ethics and treatments in the United States. To get accepted into these programs, one must have an extensive amount of experience in conservation along with other prerequisite such as four chemistry courses, art history background, studio arts, and any other related concentrations. Europe is also known for prestigious graduate-level programs in art conservation. A few of these include Northumbria University; West Dean, Courtauld Institute of Art; Camberwell College of Arts, University of Arts in London; University College; and Liverpool University. Unlike the prerequisites for schools in North America, European programs recommend having had precious experience in conservation, but it is not required. Nonetheless, because of the nature of conservation, graduate-level programs require that students pick from a type of material to specialize in. These materials can range from paintings, works on paper, books, photographs, electronics, textiles, furniture, archaeological materials, and architectural structures. Because of the complexity of materials and the ranging difference between them, it is crucial that the conservator consider working with conservation scientists for the purpose of instrumental analysis.

¹¹ "Become a Conservator" in AIC. Accessed February 2, 2018. <http://www.conservation-us.org/jobs/become-a-34-conservator#.WpHIVROCzBI>.

In addition to being knowledgeable in conservation science, the modern conservator in the United States “should collaborate with curators, archivists, archaeologists, architects, and artists, and should understand a vocabulary of technology and connoisseurship that may range from the contents of a shipwreck to Indian miniature paintings. Today’s conservator should understand integrated pest management, light levels, heating, ventilation, and air conditioning systems, and should be able to speak articulately about the field to audiences ranging from grade school groups to the museum and university trustees.”¹²

Understanding the spaces that the cultural heritage inhabits is also crucial for a conservator to be aware of. Integrated pest management, light levels, ventilation, air conditioning systems, and humidity control are all important to the life of the tangible object. Conservation in the present-day looks at the preservation of material culture on a higher scale which considers multiple elements.

1.2 Shift to Conservation Ethics

When preserving material culture, one must take into account the historical context as well as the significance of the tangible object or, the intangible life of the object. Within the practice of art conservation, and in the American Institute of Conservation (AIC), there is a code of ethics that all conservators follow in the mainland

¹² Stoner, H. Joyce. *Changing Approaches in Art Conservation: 1925 to the Present*. Winterthur Museum, pp. 40-56.

United States. The Code of Ethics and Guidelines for Practice of the American Institute for Conservation set principles to guide conservators and those who are involved in caring for cultural property. The Code of Ethics is divided into two sections, the overall code and the guidelines for practice. The code consists of thirteen principles from the standard that a conservator must strive to when examining, documenting, treating, researching, and educating to the obligation that conservators have to adhere to the Code of Ethics. The Guidelines for Practice provide commentaries which include professional conduct, examination and scientific investigation, preventive conservation, treatment, documentation, emergency situations, and amendments. These guidelines are specifically meant to enhance growth and development within the field.¹³

This code of ethics is highly recommended for all conservators in the mainland United States to follow. For territories of the United States, such as Puerto Rico, there is no set code of ethics that applies to cultural institutions when taking care of material culture. The geographical location and status of both Puerto Rico and the Virgin Islands imply considerable differences in the way that material culture is preserved. Some of these differences may include but are not limited to, geographical location, socioeconomic status, and/or the economic status of the islands in the Caribbean.

¹³Our Code of Ethics.” Code of Ethics and Guidelines for Practice. Accessed February 2022. <https://www.culturalheritage.org/about-conservation/code-of-ethics>.

1.3 Puerto Rico as a Colonial Entity

The island of Puerto Rico's location was convenient for other powers to take advantage of since colonial times. This was attractive for colonizers as they would use it as a good location for the exchange of goods. The first invasion of Puerto Rico occurred with the invasion of the Americas in the 1500s. Puerto Rico was then overtaken by the United States in 1898 during the Spanish Cuban-US war. Along with the Philippines and Guam, Puerto Rico was given to the United States as spoils of war. The treaty of Paris was signed after Spain lost the war.

In the 1900s, the Foraker Act brought the civil government to Puerto Rico. This is when the island became a part of the United States under the Territorial Clause. This act was then reformed through the incorporation of the Jones Act in 1917, which brought US citizenship to the people of Puerto Rico. However, as long as the people residing in Puerto Rico, they will not give the right to vote for representatives of congress or the president of the United States.

In the late 1920s, however, Puerto Rico was undergoing a political and economic crisis that worsened with the strike of hurricane San Felipe in 1928. Hurricane San Felipe would have gone down as one of the strongest hurricanes to hit the island. Estimated damages summed up to \$50,000,000 in property damage. This led to the legislature's request for a \$100 million emergency loan from Washington in order to

rehabilitate the economy and damages.¹⁴ Washington administered \$6 million for the purpose of rehabilitating the roads, schoolhouses, and rehabilitation of farms. The Great Depression originated in the United States and with the rehabilitation funds from the United States, Puerto Rico was well under economic and



Fig. 1 San Juan, PR

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political distress. Greatly impacting events brought by the Great Depression included a drastic decrease in employment, an increase in necessities and resources,

¹⁴ Cabán, Pedro A. "Puerto Rico: State Formation in a Colonial Context." *Caribbean Studies* 30, no. 2 (2002): 170–215. <http://www.jstor.org/stable/25613375>.

¹⁵ Terrific hurricane sweeps San Juan--thousands homeless, damage estimated at millions in Porto Rico's capital. San Juan Puerto Rico, 1928. [?] Photograph. <https://www.loc.gov/item/96522660/>.

decreased agriculture, and inflation.¹⁶ By the year 1929, Puerto Rico's political structure was divided into a liberal party that advocated for independence, a nationalist party that advocated for a break from the United States, and a coalition that was loyal to the mainland United States. In order to ease the social and political crisis on the island, the president of the commission, scientist, and counselor of the University of Puerto Rico Carlos Chardón formulated the Chardón Plan in 1934. Along with Chardón, President Franklin D. Roosevelt and Commissioner of Agriculture Rafael Menendez Ramos were all part of the committee. This plan established the justification for economic changes in Puerto Rico. The main example of its impact is the PRRA (Puerto Rico Reconstruction Administration).¹⁷ The PRRA was a locally run federal agency that was defined by the President on August 1, 1935.

"The Administration's program intends not merely immediate relief but permanent reconstruction for the Island. To this end, the projects in contemplation will see to ensure every person on the Island a position of reasonable independence and security. The economy of the Island is, of course, agricultural and the solution to its problems must be in terms of agricultural rehabilitation, It will therefore be sought to secure for each citizen a place on the land which will give him a fair share in the fruits of his own labor and a position

¹⁶ Cabán, Pedro A. "Puerto Rico: State Formation in a Colonial Context." *Caribbean Studies* 30, no. 2 (2002): 170–215. <http://www.jstor.org/stable/25613375>.

¹⁷ <https://www.80grados.net/el-profesor-de-la-upr-y-el-plan-que-trasnsformo-al-pais/#:~:text=La%20formulaci%C3%B3n%20de%20planes%20tiene,de%20la%20UPR%2C%20Carlos%20Chard%C3%B3n.>

of independence and security. This will require the establishment of many persons in small farming units. It will also require that these small farmers be ensured adequate processing and distributing facilities at a reasonable cost. Diversification of agricultural production will be sought by the program in order that the Island may approach a self-sustaining status. Cheap and available electric power, good roads, reforestation, and adequate housing are also essential to effect the Administration's program... I am anxious that the Government of the United States shall discharge fully its responsibilities to the Puerto Rican people...." (Report of the Puerto Rico Reconstruction Administration, December 1938)

The PRRA, in its principles, did have an impact on Puerto Rico's economy as it helped employ 60,000 people. The Administration also achieved paving cement as a part of the development of the structure of the island. It also implemented electricity in rural areas, health programs, and education spaces.¹⁸ This program was the first step toward Puerto Rico's current standing with the United States.

In the present day, the term "commonwealth" is often used when describing the state of Puerto Rico. The creation of the Commonwealth of Puerto Rico occurred in 1952 when it was established as a legal category under Public Law 600 of 1950. The

¹⁸ Geoff Burrows. "Rural Hydro-Electrification and the Colonial New Deal: Modernization, Experts, and Rural Life in Puerto Rico, 1935–1942." *Agricultural History* 91, no. 3 (2017): 293–319. <https://doi.org/10.3098/ah.2017.091.3.293>.

presentation of this to the United Nations was the final strategy to legitimize the status of colonial territories in the Caribbean.¹⁹ Consequently from the multiple overthrowing of powers on the island, Puerto Rico has seen multiple occasions of movements and organizations that have fought for the independence of the island. To this day, the independent political party has yet to get into office.²⁰

The state of colonialism and its ties to the United States signifies that Puerto Rico's government and funds are greatly affected by the United States.

1.4 Brief History of Art Conservation in Puerto Rico

Luis A. Ferré was the son of Mary Aguiayo Casals and Antonio Ferre Bacallao. He was born on February 17th, 1904, in Ponce, Puerto Rico. His father was a mechanical engineer, who helped influence Ferre's creativity and curiosity for science. His love for music increased once he began to take piano lessons at the age of seven. By thirteen, he had mastered *Rondo Capriccioso*, which led him to win first place in a music competition. As a young boy, he would experiment a lot with chemistry. He went to high school in Morristown, New Jersey, and eventually obtained higher education in Massachusetts, at MIT. Simultaneously, attained a master's degree in mechanical engineering. In his adult life, Luis A. Ferré was an art collector, a musician, and an

¹⁹ José Atilés-Osoria. "Colonial State Terror in Puerto Rico: A Research Agenda." *State Crime Journal* 5, no. 2 (2016): 220–41. <https://doi.org/10.13169/statecrime.5.2.0220>.

²⁰Idem.,.

engineer. After attaining his degrees, Ferre returned to the island of Puerto Rico to his family's new enterprise: The Puerto Rico Iron Works, which became the main supplier of steel structures and machinery the industry for all of Puerto Rico and the Caribbean.²¹ True that he was brilliant in the sciences, but he was also very fond of the arts. According to *Americas*, Ferre aided libraries, schools, and the education of cultural heritage. The idea of building a museum came from Mr. Salomon Van Berg, who invited Ferré and his family to his residence on Park Avenue, New York City. Mr. Van Berg at the time had a grand collection of Flemish and Dutch paintings. This encounter led Ferre to acquire the first few pieces that the Museo de Arte de Ponce would display.²² Ferré's connection to Mr. Van berg also connected him to art historian Dr. Julius Held, which was a crucial contributor of the Anton J. Konrad Conservation Center.²³

Luis A. Ferré wanted the museum's collection to be accessible to the people of Puerto Rico while simultaneously inspiring them to creativity. He also wished for people to admire Europe's greatest painting styles. The Museo de Arte de Ponce officially opened its doors on January 3, 1959. The Luis A. Ferré Foundation was the main source of funding for the museum when it first opened. The Foundation was

²¹ *Idem.*, p.13.

²² Benigno Trigo states in *Masterpieces of European Paintings from Museo de Arte de Ponce* that around five or six artworks were purchased under Salomon Van Berg's advisory, nonetheless, he offers no account of the painting's titles.

²³ Lee Sorensen, "Julius Held" in *Dictionary of Art Historians*. Accessed February 2, 2018, [http:// 57www.arthistorians.info](http://57www.arthistorians.info).

created by him and his wife in 1956, would promote the development of arts and education in Puerto Rico:

THE PRINCIPAL PURPOSE OF THE LUIS A. FERRE FOUNDATION, INC. (LAPS) IS TO OPERATE, MAINTAIN, CONSERVE, AND EXHIBIT ITS COLLECTION OF ART AT THE MUSEO DE ARTE DE PONCE (MAP), A MUSEUM IN PUERTO RICO ACCREDITED BY THE AMERICAN ALLIANCE OF MUSEUMS. LAFF OWNS ONE OF THE FINEST AND MOST IMPORTANT COLLECTIONS OF EUROPEAN ART IN THE WESTERN HEMISPHERE. MUSEO DE ARTE DE PONCE CONNECTS THE COMMUNITY WITH THE RICHNESS OF THE WESTERN ART AND ITS MAKERS, FROM THE FOURTEENTH CENTURY TO THE PRESENT.²⁴

The museum first opened in a Spanish Colonial Creole mansion that was renovated to the museum's needs. The mansion is located on Calle Cristina in the city of Ponce. At the time of its opening, the museum offered the public a collection of seventy-one paintings. Most of these paintings were from the 15th to 20th centuries and of Italian, English, Spaniard, Flemish, and Dutch origin.²⁵ The opening of the museum

²⁴ "Luis a Ferre Foundation Inc." Luis A Ferre Foundation Inc - GuideStar Profile, 2022. <https://www.guidestar.org/profile/66-0235625>.

²⁵ In Museo de Arte de Ponce: Renovation and Expansion Project

brought many visitors and creative thought to the people of Puerto Rico El Marqués de Lozoya recalls:

“Its spacious rooms are very soberly decorated so that nothing disturbs the contemplation of the paintings.”

The museum’s collection was only growing with time. In 1962, The Samuel H. Kress Foundation donated twelve paintings to the Museo de Arte de Ponce. This was the museum’s biggest donation. With the expansion of the collection, soon the space of the museums was becoming limited and there was in need for a bigger space to house and display all of the paintings. By the end of 1962, the museum on the Calle Cristina housed around 300 artworks.²⁶

²⁶ Juan Antonio Gaya Nuño, “Pintura española en Ponce” in Blanco y Negro 72 (December 8, 1962)



Fig. 2, Museo de Arte de Ponce, Calle Cristina (1959)²⁷

As a solution to the decreasing space to display the artworks, Ferre decided it was time to expand. He set out to build a new space for the museum, a more modern space that was built to the designs of architect Edward Durell Stone, which was renowned for projects such as the MoMA in New York City and the Jenney Center, Washington D.C.²⁸ The new location of the museum was not centrally located in Ponce like Calle Cristina, rather, it was located a few minutes south of its original location, on

²⁷ Photocopy of “Museo Calle Cristina” in *Memorias de Ponce*, (San Juan, P.R.: Editorial Cultural, 1996).

²⁸ <https://museoarteponce.org/en/the-museum/the-building/>

Avenida las Américas right in the heart of the Pontificia Universidad Católica de Puerto Rico.

In addition to Ferre's involvement in the arts, he was also concerned about the physical state of the artworks in a tropical climate. Before even moving to the new location of the Museum of Arte de Ponce, he contacted a professional known as Ingrid-Marta Nordin-Pettersen, which was a Swedish art conservator and restorer who left Germany with her husband, Mr. Julius Held.²⁹ When the museum was still located in Calle Cristina, Mrs. Held would advise Mr. Ferré on the correct storage and handling of works of art in the tropic under stable humidity and temperature levels. Ingrid Held's work continued after the Museum on Calle Cristina was transferred to Avenida Las Américas in 1965. She was an active participant in the process of organizing, preserving, and displaying the collection in the galleries of the new building. Additionally, due to her performance in the treatment of the artworks presented in Catalogue I: Paintings of the European and American Schools, Mr. Ferré would write the following remark: "I also wish to thank Mrs. Ingrid-Märta Held for all the fine work she has done in restoring those paintings that needed attention."

As Verónica Mercado outlines in her thesis Ferré stated that: "Her workspace was considerably limited, while also stating the following: [...] The place she used [to work in] was the artworks storage room in the same building [where the collections

²⁹ Sorensen, "Julius Held" in Dictionary of Art Historians. Accessed February 2, 2018, [http:// 81 www.arthistorians.info](http://www.arthistorians.info).

were exhibited]; the lighting was not favorable due to the use of fluorescent tubes. There she worked over the paintings and took small notes, on her condition reports. She also brought her own materials to her work. Despite her excellent work and commitment, Ingrid-Märta's health deteriorated, limiting her visits to Puerto Rico only when required. Mrs. Held would support M.A.P. until 1976; her final condition reports date to March 1976. Upon her retirement, Mr. Ferré decided to hire a permanent conservator to oversee the health of the collection and train local students interested in the field. Since there were no professionally trained Puerto Rican conservators in the 1970s, Mr. Ferré faced the need to contact another foreign conservator to support M.A.P.'s enterprise. To this request, Dr. Julius Held recommended a capable expert for the task as Miss. Aravena confirmed: Don Luis sought the recommendation of Dr. Held to find a professional who could come here, and stay here [permanently in Puerto Rico], to create and design a space, equip it, and at the same time train young people to take charge of the collections' conservation [once the head conservator retires]. That's what Don Luis wanted. And Dr. Julius Held recommended Anton Konrad."³⁰

In search of another conservation professional that might be of assistance to the Ponce Museum's collection, Ferré contacted conservator Anton J. Konrad, who traveled to Puerto Rico in 1977. Konrad, who was born in Germany discovered the arts at an

³⁰ Mercado Oliveras, Verónica. "History of Ponce Art Museum's Anton J. Konrad Conservation Center Until 1985," 2018.

Oliveras's undergraduate thesis is an in-depth study on the Anton J. Konrad Conservation Center, a center of art conservation in the Museo de Arte de Ponce. This resource provides background information on the biggest conservation center in the island of Puerto Rico.

early age. He joined a painting firm at the age of 18, as stated in an interview for the *JAIC Oral History Project*.³¹ During his time at the firm, he would learn different painting techniques specifically on painted surfaces such as frescoes. Konrad was not much involved in the field of conservation until he met Louis Pomerantz, a conservator of the Art Institute of Chicago. In his conservation career, he worked in institutions such as the Brooklyn Museum, State Street in Brooklyn, the Smithsonian American Art Museum, and the Smithsonian Analytical Laboratory.³² In the year 1976, Konrad agreed to assist Ferre in the establishment of the first conservation center of the Caribbean. Konrad began by addressing the treatment of the artworks that were already a part of the collection. The conservator then organized a training program that would only accept Puerto Rican students to train in conservation, as highlighted in this draft by Konrad:

“We are presently working on a proposal for an NEA-grant to set up a training program in conservation. Its purpose is to train Puerto Ricans in the conservation/restoration of works of art. Rather than trying to compete with such programs as Winterthur, N.Y.U. - Conservation Center or Cooperstown, we want to create conservation-technicians in an apprentice type of 3 years and admitting a maximum of three students. Local colleges will provide courses in art history and chemistry when necessary. The proposal allows for visiting

³¹ Michael Heslip, Interview to Konrad Anton October 25, 1977, p.1.

³² Ibid, 5.

specialists in the various aspects of conservation such as paper, metal, textiles, etc”.³³

The program was granted by 1982 and recruited four students from the island of Puerto Rico: Luis Villabol, Margarita Torres, Lidia Aravena, and Ivette Torres. Margarita Torres would then leave the program as she was in the midst of an undergraduate degree program, and Luis Villabol would have been asked to leave the program, which then admitted Ángel Santiago, a fine arts student at the time. This program trained the students in conservation disciplines studio arts, art history, and chemistry. After three years of training, the students were prepared for the challenges of the preservation of artworks of the Museo de Arte de Ponce. Lidia Aravena and Ángel Santiago remain in the Anton J. Konrad Conservation Center at the museum to this day.³⁴

Chapter Two

CULTURAL INSTITUTIONS

2.1 Funding Institutions

Finding funding for the arts has been an issue since the beginning of the understanding of the importance of artistic pursuits within society. There has been debate about whether or not it is profitable to spend money on the arts. In the United

³³ Anton Konrad, in Letter to Mr. Jose Orraca from September 2, 1980, p.1

³⁴ Idem.

States, museums and cultural institutions are mainly funded by private sources, charging for membership, and/or estate donations. A lack of arts funding is also prevalent in Puerto Rico and the Virgin Islands. Though there have been many programs that advocate for the funding of public arts, as outlined by the Americans for the Arts Program:

In reality, the arts amplify what students are able to absorb academically.

Students do better in academic subjects when they have a regular infusion of the arts. Consequently, supporting public funding for the arts simply makes good sense. Society will ultimately benefit.³⁵

Places such as cultural institutions contain more than just artifacts of different cultures, these artifacts represent cultures and represent cultural significance, which can enrich future generations and our current society. Americans for the Arts is an organization that strives to build recognition in the arts and to advocate for diverse networks who cultivate the arts in America. In 2018 the organization conducted one of the largest surveys about the arts with a sample of 3,023 American adults that were interviewed online about the importance of the arts. The survey gathered that 90% of Americans agree that artistic institutions are important to the quality of life, 94% of

³⁵<https://www.americansforthearts.org/blog-feed/why-public-funding-for-the-arts-matters#:~:text=In%20reality%2C%20the%20arts%20amplify,Society%20will%20ultimately%20benefit.>

Americans agree that students should receive education in the arts, and 86% agree that art institutions are important to local businesses and the economy.³⁶

Within the research of understanding how conservation works in these places, we must first understand where it is carried out, and how the cultural space came to be. To have a cultural space such as a museum, one must have the funds to establish these institutions. The Government Development Bank for Puerto Rico (GDB) has played a significant role in Puerto Rico's economic development as well as its social development. It was formed in 1942, right around the time when Puerto Rico's economy was based on agricultural products.³⁷ The GDB was the main provider for the funding of the Museo de Arte de Puerto Rico. Another important program for the arts is the Instituto de Cultura Puertorriqueña (Institute of Puerto Rican Culture). This institute was approved by the Legislative Assembly of Puerto Rico in 1955.³⁸

El 30 de junio de 1955 la Asamblea Legislativa de Puerto Rico aprobó, por mayoría de votos, el proyecto de ley en virtud del cual se creaba el Instituto de Cultura Puertorriqueña, corporación pública dedicada al estudio, conservación, divulgación y enriquecimiento de nuestra cultura nacional.³⁹

³⁶ Americans for the Arts. "What Americans Think about the Arts," 2018. <https://www.americansforthearts.org/by-program/reports-and-data/legislation-policy/national-arts-administration-and-policy-publications-database-naappd>.

³⁷ Government Development Bank for Puerto Rico. "The GDB: Seven Decades of Service to Puerto Rico (1942-2012)." Commonwealth of Puerto Rico, 2016. http://www.gdb-pur.com/about-gdb/history_01.html.

³⁸ "Historia ." Instituto de Cultura Puertorriquana, 2018. <https://www.icp.pr.gov/historia/>.

³⁹ "Historia ." Instituto de Cultura Puertorriquana, 2018. <https://www.icp.pr.gov/historia/>.

On June 30, 1955, the Legislative Assembly of Puerto Rico approved, by majority vote, the project, by virtue of a law that created the Institute of Puerto Rican Culture, a public body dedicated to the study, conservation, indulgence, and enrichment of our culture.



*Figure 3. Visit the Fortaleza first Board of Directors of the Institute*⁴⁰

The Institute of Puerto Rican Culture’s mission is to research, conserve, promote and divulge Puerto Rican culture in its diversity and complexity. One of the biggest institutes under the IPC is the General Archives of Puerto Rico located in San Juan, the capital of the island. The archive was established in 1955 and houses 90,000 cubic feet of important cultural heritage which include documents, works on paper, printed works on paper, publications, photographs, and films in various formats.⁴¹ The archives also house government documents of the island. The initiative has recently adapted to a digitized way of housing documents through the Archive of Music and Sound, which

⁴⁰ “Historia .” Instituto de Cultura Puertorriquena, 2018. <https://www.icp.pr.gov/historia/>.

⁴¹ <https://www.icp.pr.gov/archivo-general/>

contains close to fifteen thousand musical compositions and 10,000 recordings of Puerto Rican traditional music.⁴² There are multiple cultural institutions under the Institute including Museo de Casa Blanca, Parque Ceremonial Indígena de Caguana, Casa Luis Muñoz Rivera, Museo y Parque Histórico Ruinas de Caparra, Mausoleo Luis Muñoz Rivera, Casa Serralles Museo de la Música Puertorriqueña, Museo Casa Cautiño, Casa Jesús T. Pinero, Fuerte Conde de Mirasol, and Museo de Arte Religioso Santo Domingo de Porta Coeli.⁴³

2.2 Nonprofit Organizations

A nonprofit organization is a group organized for purposes other than generating a profit and in which no part of the organization's income is distributed among the directors, members, or officers.⁴⁴ In the United States, some states exempt nonprofits from state tax.⁴⁵ This is applicable to all organizations that are religious, charitable, scientific, public safety, literary, education; and/or sports. All of the cultural institutions under the IPC in Puerto Rico are nonprofit organizations with the purpose of education and cultural enrichment. A for-profit organization operates with the goal of generating a profit (money). Institutions that are for-profit do this by serving visitors by selling them a product or a service. Cultural institutions like museums generate a profit by

⁴² <https://www.icp.pr.gov/archivo-general/>

⁴³ <https://www.icp.pr.gov/archivo-general/>

⁴⁴ https://www.law.cornell.edu/wex/non-profit_organizations

⁴⁵ https://www.law.cornell.edu/wex/non-profit_organizations

selling tickets and/or merchandise. With the profit that they generate, these businesses earn an income and may pay shareholders and investors of the institution.⁴⁶

Chapter 3

CURRENT CONSERVATION

3.1 Brief Summary

⁴⁶ <https://www.uschamber.com/co/start/strategy/nonprofit-vs-not-for-profit-vs-for-profit>

Present-day conservation has a different element that distinguishes it from the early stages of the profession--technology. Along with years of experience, the element of documentation became crucial not only for the assessment and treatment of objects but also to ensure the future care of those objects. Documentation is a part of every conservation assessment or treatment and photographic documentation—the capture of accurate images—is the core of the process (Winterthur Museum). Conservation documentation can be defined as the textual and visual records collected during the care and treatment of an object.⁴⁷ In art conservation, documentation is one of the most crucial steps to successful treatment. Proper and formal documentation of a certain object can let us know where the object comes from, what it is, its creator, and details about past treatments. Documentation usually includes photographic evidence, sometimes, conservators would draw in where the damaged areas of a certain object are for future conservators to understand its past treatment and condition issues prior to treatment. In conservation, the document that is used as the form of documentation is often called a “condition report”. A lengthy and detailed condition report consists of details on the existing condition of the object, condition after treatment, material composition, the technology used, conservation methods used, materials used during treatment, and administrative details.⁴⁸

⁴⁷ Moore, Michelle. “Journal of Conservation and Museum Studies.” *Journal of Conservation and Museum Studies*, Ubiquity Press, 1 Nov. 2001, www.jcms-journal.com/articles/10.5334/jcms.7012/.

⁴⁸ *Ibid*, 8.

Nowadays, conservation laboratories are shifting to technology to complete these documents because, with time, physical copies of these documents can be lost or too deteriorated to read.⁴⁹ Regulations are being carried out by museums that state that any document/condition report must be scanned so that there is a computerized version of all documents. For example, the National Gallery in London is creating an accessible database that is designed to record a range of image and text-based documents of conservation-related treatments of objects. There are two databases: one for conservation professionals and one for the general public to expand knowledge of conservation practices and treatments.⁵⁰ Without any type of documentation, useful and vital information about certain treatments that were done on an object will be lost to history, and future conservators that encounter this object may not know how to approach its treatment without this information. After documenting all details of the object, conservators then must move to the treatment proposal for the specific object, this treatment must first be approved by museum policies and/or the owners.

After the examination and documentation of an object, the conservator should have enough knowledge about the object and be now allowed to perform the necessary treatment. According to the American Institute for Conservation (AIC), treatment is

⁴⁹ Roy, Ashok, et al. "Conservation Documentation in Digital Form - A Continuing Dialogue About the Issues." *Studies in Conservation*, vol. 52, no. 4, 2007, pp. 315–317. *Jstor*, doi:10.1179/sic.2007.52.4.315.

⁵⁰ *Ibid*, 315–317.

The body of tools, materials, practices, procedures, and methods used to deliberately alter the chemical and/or physical characteristics of cultural heritage in order to achieve appropriate goals, such as prolonging the expected life of objects and helping to promote a better understanding of their intrinsic properties and meaning.⁵¹

It is while performing treatments that conservators are challenged to fully utilize their manual skills, knowledge, and experience in order to fulfill long-term treatments on their objects.⁵²

3.2 Prevention

Understanding the different treatment options within their chosen discipline is crucial for a conservator to practice. One of the newer conservation movements is known as preventive conservation. This newly acknowledged branch of conservation requires control of the environment. For proper preventive care, one must consider the factors that can affect and deteriorate an object. In the majority of the cases, these factors are environmental such as light exposure, temperature, humidity, and atmospheric

⁵¹ Perkinson, Roy, et al. *Defining the Conservator: Essential Competencies*. American Institute for Conservation of Historic and Artistic Works, 2003.

⁵² Perkinson, Roy, et al. *Defining the Conservator: Essential Competencies*. American Institute for Conservation of Historic and Artistic Works, 2003.

gasses.⁵³ Within its treatment, preventive care strives to reduce deterioration by controlling these factors.⁵⁴ Often, preventive care is a difficult task to execute on every object in museum collections because there can be hundreds of objects and some can be more susceptible to certain environmental conditions than others. However, this preventive treatment is a method that is hoped to be incorporated into all conservation laboratories as it stabilizes deteriorating objects, strengthens weak ones, and protects vulnerable ones. Without preventive care, the material culture that is already in unstable condition runs the risk of worsening with age.

3.3 Restoration

Taking paintings as an example, agents of deterioration become hazardous and noticeably damage their aesthetics and structure. Overexposure to light, for example, can lead to the paint layer's discoloration. This is an issue that can be observed with the naked eye as the paint layer will seem faded and the colors will appear muted. Overexposure to light is a difficult issue to address because fading of varnishes and pigments is not a reversible process.⁵⁵ This means that no solution or chemical will bring the pigmentation back. In the event of this, conservators then must plan a course of action; whether simply the cleaning of the surface or completing conservation treatment

⁵³Ibid, 6.

⁵⁴ Ibid, 8.

⁵⁵ Kirsh, Andrea, and Rustin S. Levenson. *Seeing through Paintings: Physical Examination in Art Historical Studies*. Yale University Press, 2002.

including extensive filling and inpainting of the whole artwork.⁵⁶ At an event like this, it is no longer a preventive treatment as it involves physical interaction with an object. It is imperative to acknowledge that preventive care generally does not involve direct contact with an object. This also differentiates conservation from restoration methods.

Contrary to the general public's belief, there is a notable difference between preservation, conservation, and restoration treatment. According to Philips Ward, former director of the Canadian Conservation Institute (CCI):

Restoration is a race against time for the maximum extension of the life of the object, and thus that of the work of art. This determination also implies that restoration is not a branch of science. Its aim is not to attain certain historical or scientific results, but to utilize such results in the interest of the object.⁵⁷

Restoration is the oldest known practice of conservation; its goal is to make the piece of art look like what the artist intended the public to see. This treatment consists of prioritizing the image the artist created rather than its structural condition or original artist materials, by covering damages with new layers of paint, varnishes, or lacquers. This method was used frequently in the origin of conservation, and although many

⁵⁶ Ibid, 156.

⁵⁷ Ward, Philip. "The Nature of Conservation". *A Race Against Time, The Getty Conservation Institute* pp. 9-12.

conservation treatments contain elements of restoration, it comes with many risks and difficulties.

Within conservation treatments, restoration has proved to have a more damaging effect on material culture if not executed correctly.⁵⁸ The “*World’s Worst Restoration*” is an appropriate example of the negative effects of restoration. This infamous restoration became known worldwide. “Restorer” Cecilia Gimenez decided to restore a historical face of Christ in the Sanctuary of Mercy church in Borja, Spain. Her restoration brought panic and ridicule to the conservation world, and her lack of skill and knowledge caused irreversible damage to the fresco, making the face of Christ look more like a defaced monkey.⁵⁹ The news of this failed restoration surfaced hundreds of reports of failed restorations such as Louvre’s “*Veronese’s Mother*”, the scraping of paint off Leonardo’s “*Last Supper*” and Vermeer’s “*Girl with a Flute*”. These failed restorations caused irreparable damage to valuable pieces of our history and destroyed the integrity of such works. It is because of all these failed restorations that conservators are looking to avoid the extensive restoration of valuable artworks if possible.

Considering that art restoration has been a part of conservation since its origin, it would be complicated to suggest that it gets boycotted entirely. However, in recent

⁵⁸ Daley, Michael. “Wibble!” *Artwatch*, The Artwatch UK Journal, 30 Aug. 2012, artwatch.org.uk/tag/barbara-ellen/.

⁵⁹ *Ibid*, 5.

news, it seems that the restoration of objects is being misinterpreted by the media. The cause of this is mainly misleading social media posts that several “conservators” have employed to promote their businesses and a general lack of understanding of the field of conservation.

One of the main arguments against restoration is reversibility. This word is often used by the media to justify modern restoration practices to the public. The word reversibility is applied to restoration to ensure the public that all or any treatment is done to an object can be undone.⁶⁰ The controversy of this term is often a complicated one as sometimes, “restorers” have a hard time deciding what is more important to approach: the physical and chemical structure of the object, the significance of the original material, or the aesthetic of the image.⁶¹ Taking social media as an example, social media is one of the most productive ways of sharing to the general public what conservation is. However, in recent art conservation news, social media platforms do not always portray the full definition of conservation. Some modern conservators or restorers focus more on the “likes” and the aesthetic of their pages than their actual treatments, portraying an inaccurate picture of the conservation process.

3.4 Conservation Approaches in Puerto Rico and the Virgin Islands

⁶⁰ Beck, James. “Reversibility, Fact Or Fiction?: The Dangers Of Art Restoration.” *Source: Notes in the History of Art*, vol. 18, no. 3, 1999, pp. 1–8. *Jstor* , doi:10.1086/sou.18.3.23205061.

⁶¹ *Ibid*, 8.

The conservation field in Puerto Rico and the Virgin Islands began in the twentieth century with the addition of the Anton J. Konrad Conservation Center at the Museo de Arte de Ponce in Puerto Rico. This laboratory was the first one dedicated to the preservation of cultural heritage in all of the Caribbean. The Museo de Arte de Ponce was funded and built by scientist, philanthropist, and engineer, Luis A. Ferré in 1959. After its opening, the Museo de Arte de Ponce (MAPR) was moved to a bigger location, a new building that houses nearly 2,000 items in its collection. The conservation center at the MAPR treats three-dimensional objects, paintings, and works on paper. This conservation center in Ponce, however, is not the only center for the conservation of cultural heritage on the island of Puerto Rico. In the year 1995, studies and research were conducted by the Compañía de Turismo de Puerto Rico, which strove to build a museum of Puerto Rican art. Consequently, the Banco Gubernamental de Fomento para Puerto Rico (BGF) approved the project and assigned funding to carry out the construction of the museum.⁶² The museum would be built by restoring the aged Municipal Hospital of San Juan. The Museo de Arte de Puerto Rico officially opened on June 30, 2000, by opening its first-ever exhibition, “The Treasures of Puerto Rican Painting.”

⁶² Museo de Arte de Puerto Rico. “Historia Del Mapr.” Historia del MAPR | Museo de Arte de Puerto Rico, 2011. <https://www.mapr.org/es/museo/sobre-el-museo/historia#:~:text=Origen,de%20Arte%20de%20Puerto%20Rico>.

For the first time, Puerto Rican art was displayed along with numerous artworks by important painters such as Francisco Oller.⁶³ The Museo de Arte de Puerto Rico (MAPR) also houses a conservation laboratory. In 2018, the museum received a grant from the Andrew W. Mellon Foundation as an emergency fund to assist with the conservation of cultural heritage that had been affected by the two major hurricanes in 2017, Hurricane Irma and María. From the funding, the museum has been able to evaluate and treat multiple objects in the conservation laboratory, under the direction of Sol E. Rivera, head conservator of the museum.⁶⁴ By March 18th, 2019, the conservation laboratory had worked on eight installations with a total of 228 objects. Seventy of these were works on paper and eighty were paintings and nine of which underwent conservation treatment. With the funds from the Andrew W. Mellon Foundation, the conservation laboratory was able to bring two more Puerto Rican conservators to be on staff: René Sandín (three-dimensional objects conservator) and María Cristina de Rivera (paper conservator). The laboratory also now has two extra conservation assistants Olga Calvo and Camille Ferrer.⁶⁵

⁶³ Museo de Arte de Puerto Rico. “Historia Del Mapr.” Historia del MAPR | Museo de Arte de Puerto Rico, 2011. <https://www.mapr.org/es/museo/sobre-el-museo/historia#:~:text=Origen,de%20Arte%20de%20Puerto%20Rico>.

⁶⁴ Web, Equipo. “MAPR Recibe Beca Para Conservación De Obras.” *ElVocero.com*, May 11, 2018. https://www.elvocero.com/escenario/mapr-recibe-beca-para-conservacion-de-obras/article_76a99330-e11e-11e8-b135-2becdc1e6835.html.

⁶⁵ DeDiego. “Bien Activo El Laboratorio De Conservacion Del MAPR.” Web log. *299 De Diego Blog Del MAPR* (blog). MAPR, March 18, 2019. <https://blog299dediego.wordpress.com/2019/03/18/bien-activo-el-laboratorio-de-conservacion-del-mapr/>.

Aside from these two main conservation centers in Puerto Rico, the island counts on individual Puerto Rican conservators as a resource in case of an emergency in collections. This resource was compiled by the Universidad de Puerto Rico: Mayagüez Campus. The list is divided into different branches of conservation such as conservation science (Científicos en Conservación), photograph conservation (Fotografía), three-dimensional objects (Objetos), and paper conservators (Papel), painting conservators (Pintura), and textile conservators (Textil). It is important to note that some of the conservators on this list do not currently reside on the island.

List of Puerto Rican conservators to contact in an emergency:

<p>Científicos en Conservación</p> <ul style="list-style-type: none"> • Antonio Martínez • Johnny Lugo • Julio del Hoyo <p>Fotografía</p> <ul style="list-style-type: none"> • Nitza Luna <p>Objetos</p> <ul style="list-style-type: none"> • Ángel Santiago Torres <p>Papel</p> <ul style="list-style-type: none"> • Beatriz Centeno • Bianca García 	<p>Pintura</p> <ul style="list-style-type: none"> • Bianca García • Freddy Caballero • Gloria J. Irizarry • Irene Esteves • Isabel Shofer • Johnny Lugo • Maribel Canales • René Sandín • Santiago Espinal • Sol Rivera <p>Textil</p> <p>Laura Fernández</p> <p>Soraya Serra</p>
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<ul style="list-style-type: none"> • Viviana Van Vliet 	
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Figure 4. Adapted list from the MAPR of Puerto Rican Conservators⁶⁶

Mentions of emergency and prevention seems to be a common denominator in all reports, studies, and research on conservation in Puerto Rico and the Caribbean in general. This is due to the geographical location of the Caribbean. The Caribbean is one of the most hazard-prone regions in the world. Its location allows the climate to be warm and humid almost all year round, but it also allows for the development of storms and hurricanes.⁶⁷

3.5 Natural Disasters in the Caribbean

The geographical location of the Caribbean makes the region a hotspot for natural disasters. A common natural disaster that occurs in the Caribbean and on the Atlantic is called hurricanes. The formation of a hurricane occurs when there is warm ocean water mixed with humid environments, which causes the humidity in the air to flow to a low-pressure zone over the warm water. With the rising of the air, the hurricane begins to rotate. Many of these hurricanes begin as a tropical storm which grows with a

⁶⁶ Ayala-Gonzalez, Hilda Theresa. “Colecciones En Tiempos De Emergencia: ¿Cómo Actuar?: Contactos Importantes.” LibGuides UPRM, November 2017. <https://libguides.uprm.edu/rescatecoleccionesPR/contact>.

⁶⁷ Gencer, Ebru A. “An Overview of Urban Vulnerability to Natural Disasters and Climate Change in Central America & the Caribbean Region.” Fondazione Eni Enrico Mattei (FEEM), 2013. <http://www.jstor.org/stable/resrep00980>.

constant energy supply from warm ocean water.⁶⁸ In more recent years, the concern for the increase of natural disasters has increased with the impact of climate change. According to the Center for Climate and Energy Solutions, climate change has led to warmer water temperatures with higher sea levels, which can increase the intensity and impact of hurricanes.⁶⁹

Recent storms such as Hurricane Harvey in 2017 (dropping over 60 inches in some locations), Florence in 2018 (with over 35 inches), and Imelda in 2019 (44 inches) demonstrate the devastating floods that can be triggered by these high-rain hurricanes.⁷⁰

In the case of the Caribbean, the effects of Hurricane Maria not only affected the infrastructure of the islands but also shifted the way that institutions approached their collections as well as how to prepare for a natural disaster of this scale. In September 2017, islands of the Caribbean were affected by Hurricane Irma and Maria within three weeks. Cultural institutions such as museums, archives and libraries usually have an emergency preparedness plan in place to protect the cultural heritage. However, according to librarian and Hilda Tersea Ayala, who works at the General Archives in Puerto Rico, these methods were not successful as they have been previously and the

⁶⁸ “Center for Science Education.” How Hurricanes Form | Center for Science Education. UCAR, 2018. <https://scied.ucar.edu/learning-zone/storms/how-hurricanes-form>.

⁶⁹ Frojmovic, Michel, Jennifer Graeff, and Asad Mohammed. “The Impact of Climate Change in the Caribbean.” *Planning and the Climate Change in the Caribbean*. Lincoln Institute of Land Policy, 2013. <http://www.jstor.org/stable/resrep18430.5>.

⁷⁰ Seven, Habitat, ed. “Hurricane and Climate Change.” *Hurricanes and climate change*. Center for Climate and Energy Solutions, 2022. <https://www.c2es.org/content/hurricanes-and-climate-change/>.

damages stretched beyond the staff's control.⁷¹ *Puerto Rico's Libraries, Archives and Museums Road to Recovery* reports the librarian Hilda Teresa Ayala's experience after the hurricanes hit the island on 2017. She recounts that there simply was not enough time to rescue and protect objects from a category five hurricane while simultaneously finding refuge for oneself and loved ones.

“Even if we wanted to, the depth of destruction impeded people from moving out of their houses. Roads were flooded or covered with debris, bridges were gone, and no method for communication existed as the electrical grid, towers, and optical fibers were completely destroyed. The world knew more about our state than us and in those last two weeks of September it came together to our aid.”⁷²

The hurricane began as a tropical storm as most of them do. On September 16th, 2017, the National Hurricane Center (NHC) identified the storm as a tropical depression (only twenty-four hours prior to reaching the Caribbean). Within the next 24 hours, Maria had intensified from a category one to a category five (five being the highest category of hurricane magnitude). The hurricane remained a category five as it passed

⁷¹ Ayala-Gonzalez, Hilda Teresa. “Las Bibliotecas, Archivos, y Museos En Puerto Rico Del Embate Del Huracan Maria.” In *Biblioteca Universidad De Puerto Rico En Humacao*, edited by Evelyn Milagros Rodriguez, 2–18. Mayaguez, Puerto Rico: Centro para la Investigacion Biblioteca General, 2018.

⁷² Ayala-Gonzalez, Hilda Teresa. “Las Bibliotecas, Archivos, y Museos En Puerto Rico Del Embate Del Huracan Maria.” In *Biblioteca Universidad De Puerto Rico En Humacao*, edited by Evelyn Milagros Rodriguez, 2–18. Mayaguez, Puerto Rico: Centro para la Investigacion Biblioteca General, 2018.

through the Virgin Islands and Puerto Rico.⁷³ The quick turnaround of the hurricane caused many in the Caribbean to be ill prepared for the storm-- as were cultural institutions. As a result, cultural institutions turned to emergency response rather than preparedness. In October 2017, task forces that help with the preservation of cultural heritage such as the Heritage Emergency National Task Force (HENTF) from FEMA began to collect information on how to aid the recovery process of many institutions. From these efforts, organizations outside of the island such as the National Heritage Responders (NHR), the American Institute for Conservation of Historic & Artistic Works (AIC), and the Smithsonian were able to provide aid by having museums professionals fly to the island and assist in the recovery of cultural heritage.⁷⁴ Along with response efforts for cultural heritage, multiple workshops and conferences were held in the island of Puerto Rico for the purpose of training museum professionals on the island in the management of objects after the effects of high humidity, water, and mold. These workshops also provided resources on self-preservation and on important points of contact in the cultural heritage field in case of an emergency.⁷⁵ Before the end

⁷³ US Department of Commerce, NOAA. "Major Hurricane Maria - September 20, 2017." Major Hurricane Maria - September 20, 2017. NOAA's National Weather Service, July 13, 2021. <https://www.weather.gov/sju/maria2017#:~:text=Maria%20formed%20from%20an%20African,to%20September%2017th%2C%202017>.

⁷⁴ Ayala-Gonzalez, Hilda Teresa. "Las Bibliotecas, Archivos, y Museos En Puerto Rico Del Embate Del Huracan Maria." In *Biblioteca Universidad De Puerto Rico En Humacao*, edited by Evelyn Milagros Rodriguez, 2–18. Mayaguez, Puerto Rico: Centro para la Investigacion Biblioteca General, 2018

⁷⁵ Ayala-Gonzalez, Hilda Teresa. "Las Bibliotecas, Archivos, y Museos En Puerto Rico Del Embate Del Huracan Maria." In *Biblioteca Universidad De Puerto Rico En Humacao*, edited by Evelyn Milagros Rodriguez, 2–18. Mayaguez, Puerto Rico: Centro para la Investigacion Biblioteca General, 2018

of the year 2017, the organizations For the Nature, School of Architecture in the University of Puerto Rico, the National Trust for Historic Preservation, and the Institute of Puerto Rican Culture evaluated the structural integrity of the historic homes and buildings in the island in order to aid with their recuperation. Their report results highlighted that from 4,755 properties included in the registry for historic zone in the island, 352 of these were affected.⁷⁶

Tropical storms and hurricanes are not the only natural disaster that affect the Caribbean. From January 6th to January 11th in 2020, Puerto Rico's Seismic Network recorded three significant earthquakes with magnitudes of 5.8, 6.4 and 5.9. These principal earthquakes were followed by "aftershocks" which are typically felt stronger than the initial shock. These earthquakes were felt strongly in the south of Puerto Rico, primarily in the areas of Yauco and Guayanilla. The tremors in south of Puerto Rico affected the physical structure of the Museo de Arte de Ponce. The issue of the tremors in addition to the COVID-19 pandemic at the beginning of the 2020 caused the original conservation center in Puerto Rico, the Anton J. Konrad Center of Conservation to close temporarily.⁷⁷ The home of the famous painting, *Flaming June* by Frederic Leighton, the Museo de Arte de Ponce has recently partnered with the Museo de Arte de Puerto Rico in San Juan to display *Flaming June* in a brand-new exhibition of San Juan "Arte Victoriano" or Victorian Art. The current status of Puerto Rico's infrastructure affected

⁷⁶Ibid, 6.

⁷⁷ <https://www.theartnewspaper.com/2021/12/21/puerto-rico-museo-de-arte-de-ponce-closed-since-2020>

by the hurricanes, tremors, colonial status, and the COVID-19 pandemic influenced the fate of many cultural institutions. Nearly half of the institutions under the Institute of Puerto Rican Culture are closed either temporarily or permanently. In search for a more accurate number of active institutions in Puerto Rico and the Virgin Islands and as a part of this thesis, a search for active institutions began in order to distribute a survey, which would serve as an extension of this research.

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Chapter Four

ACTIVE INSTITUTIONS

4.1 Survey Approach

The Cultural Institutions survey was created and distributed as an addition to the research of the thesis. The data the survey provides is to get a better understanding of the status of current institutions in Puerto Rico and the Virgin Islands. More specifically, the questions focused on the way that their institutions handled their cultural heritage and how they coped with the recent natural disaster events. The survey was created and distributed via Qualtrics Software. Due to Puerto Rico's language, the survey was written in Spanish with English translations. The survey consisted of ten questions:

1. ¿Su institución es privada o sin fines de lucros? (*Is your organization profit or non-profit?*)
2. ¿Qué tipo de objetos históricos obtiene su institución? Seleccione todas las opciones que aplican. (*What kind of object does your organization possess? Select all that apply.*)
3. ¿Aproximadamente, cuantos objetos obtiene su institución? (*Approximately, how many objects are in your collection?*)
4. ¿Su institución tiene profesionales designados a conservación preventiva? (¿Si un objeto histórico sufre de daños, quien se encarga de conservarlo?) (*Does your organization have a designated collections care staff that engages in preventive conservation? (If an object breaks, who treats it?)*)
5. Seleccione la mejor opción que describa la manera en la cual su institución conserva objetos históricos. (*Which of the following best describes your institution's approach to collections care*)
6. ¿Aproximadamente, cuanto tiempo se dedica a el manejo/cuidado de colecciones en su institución? (*How much time is spent in collections care?*)
7. ¿Cuántas personas están envueltas en el proceso de mantener/cuido de colecciones? (*How many people are involved in this process?*)
8. ¿Su institución tiene un plan de emergencias en caso de desastres naturales? (*Does your institution have an emergency preparedness plan?*)
9. ¿Su institución tiene sistemas de seguridad? Ejemplo: cámaras de seguridad, guardias de seguridad, etc. (*Does your institution have security measures in place to prevent theft? E.g. cameras, security guards, etc.*)
10. ¿Tiene alguna pregunta o preocupación acerca de esta encuesta? (*Do you have any questions/concerns regarding this survey?*)

The survey was sent to all active institutions of Puerto Rico and the Virgin Islands combined (thirty-eight institutions in total). Out of thirty-eight institutions, six responses were recorded.

4.2 Survey Results

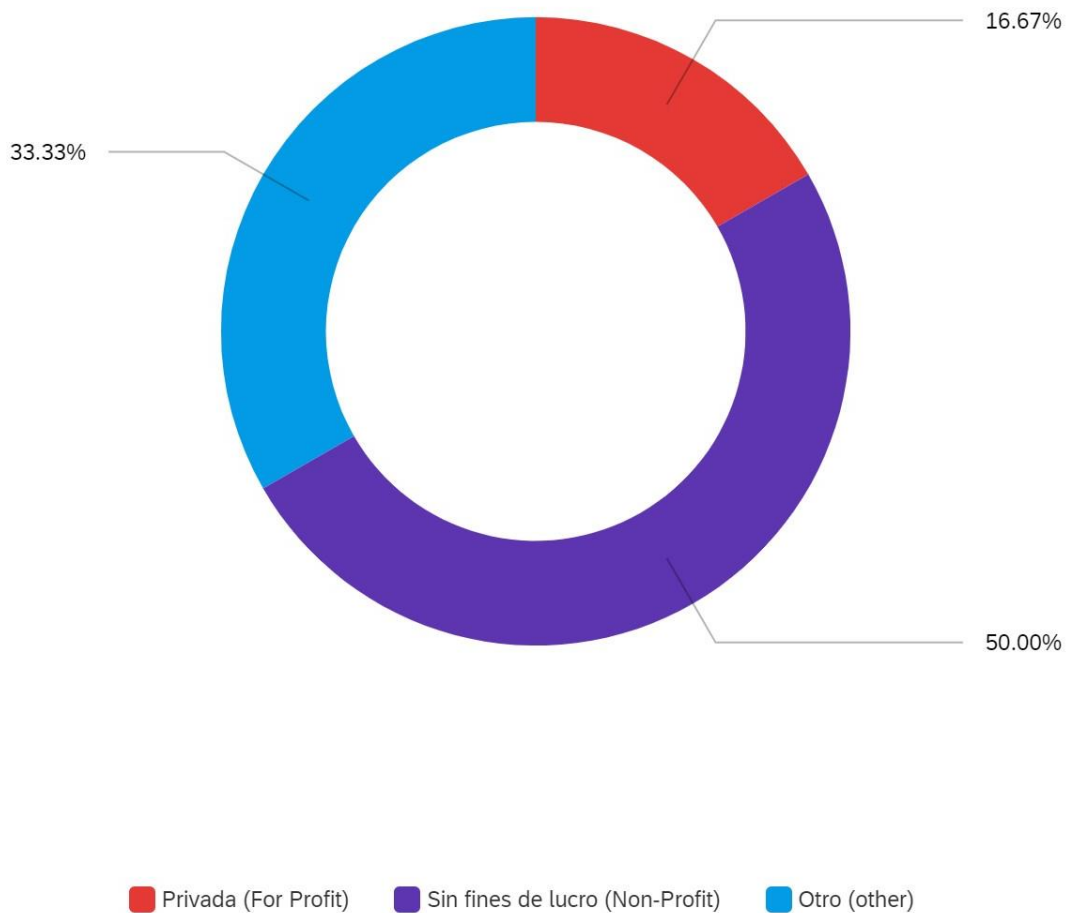
The Cultural Institutions in Puerto Rico and the Virgin Islands survey was distributed via email to all active institutions that provided an email address on their websites. Cultural institutions that did not have a website or a social media website were able to be contacted via email through the Institute of Puerto Rican Culture. In a report

completed by research services librarian Hilda Teresa Ayala-González, 109 cultural institutions (counting all libraries) were active. For the purpose of this study, “cultural institutions” refers to museums, archives, historical homes, and landmarks. In search for institutions to contact for the purpose of the survey, and according to the Institute of Culture of Puerto Rico 38 cultural institutions are currently active in Puerto Rico and the Virgin Islands. Many institutions that were running smoothly ceased to reopen after the effects of hurricane Maria in 2017, the earthquakes that occurred on the island in 2019, and the COVID-19 pandemic.⁷⁸ The results of the survey are shown in the figures below. Most institutions that responded were non-profit (50%).

In order to have a range of the number of objects that institutions hold, the survey asked how many objects are present in the institution’s collections and how many of these objects are, paintings, textiles, paper, wood, silver objects, or glassware. Out of the types of objects, most institutions have a higher amount of paper objects in their collections as seen in figure 2. Paper objects are the highest in quantity being 31%. Wooden objects and paintings stand at the second- highest quantity of object that the institutions have in their collections (both at 19%). Considering paper would be the most common material that institutions have, there is an implication that institutions would

⁷⁸ Ayala-Gonzalez, Hilda Teresa. “Las Bibliotecas, Archivos, y Museos En Puerto Rico Del Embate Del Huracan Maria.” In *Biblioteca Universidad De Puerto Rico En Humacao*, edited by Evelyn Milagros Rodriguez, 2–18. Mayaguez, Puerto Rico: Centro para la Investigacion Biblioteca General, 2018.

need galleries and housing that is managed and controlled to regulate the temperature and relative humidity in order to maintain the life of the object. Environments of high humidity and moisture are the cause of molding on paper objects.⁷⁹ In understanding the number of objects that these institutions hold the survey resulted in a range from 60 to 200 artworks. Exactly two institutions mentioned that they had no exact inventory.



⁷⁹ Ebert, Bettina. "Paper Conservation Techniques." <https://asiarta.org>. Asiarta Foundation, 2014. <https://asiarta.org/introduction-to-conservation/works-of-art-on-paper/paper-conservation-techniques/>.

Figure 5. Non-profit vs For-Profit organizations

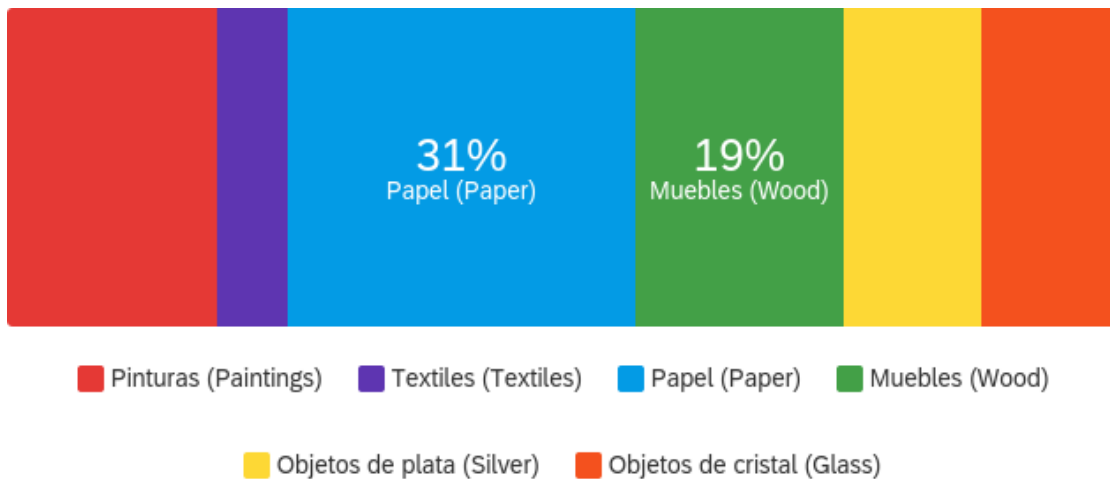


Figure 6. Amount of objects per material category

Evidence gathered from natural disaster reports in addition to the results of the survey would indicate that in many cases, these regions have a more responsive approach over prevention or restoration-based conservation. In many cases, many cultural institutions had a more response-based approach to conservation. This is highlighted by the fact that many of these institutions would not have an emergency preparedness plan until recent years after the effects of Hurricane Maria and Irma.

When asking institutions about their emergency preparedness plan, there was a tie between “yes” and “no”. Two other institutions mentioned they possess a pocket plan for emergencies. Finally, one final key aspect of the survey was to study the effect of natural disasters on institutions. The survey results revealed that 100% of the institutions that responded to the survey experienced damage to both the physical structure and certain sections of their institutions. Nonetheless, it is notable to consider that the number of institutions that responded to the survey does not reflect the total number of

active institutions in the Virgin Islands and the Caribbean. Institutions that did not respond or receive the survey are still experiencing staff shortages and temporary closing due to the Covid-19 pandemic.

CONCLUSION

This undergraduate thesis serves as the final requirement to complete a Bachelor's in Art Conservation and Art History at the University of Delaware. The research done both through literature review and through a short survey will serve as a resource for rising conservation professionals in the area of colonial Puerto Rico and the Virgin Islands. This research strives to offer a clear understanding of art conservation practice in cultural institutions of not only Puerto Rico--but the Virgin Islands as well; in hopes to cover a good portion of the Caribbean.

The research in this thesis is meant to give rising conservators from the area of the Caribbean a better understanding of the status of art conservation and overall institutions. It also serves as a resource that outlines the history of conservation and how current conservation efforts are affected by location, socioeconomic status, and the colonial status of both Puerto Rico and the Virgin Islands. The survey portion of this research provided data on the types of objects that collections hold, how they approach the preservation of material culture, and whether or not institutions are greatly affected by natural disasters that occur in the Caribbean. The current economic status of Puerto Rico and the Virgin Islands resulted in conservation professionals leaving the Caribbean in search for stable work environments in cultural institutions. According to the Museo de Arte de Ponce's press release, the museum has been closed for two years since the

events of earthquakes in the south of Puerto Rico.⁸⁰ The museum and the Anton J. Konrad laboratory remain partially open for staff only.

This undergraduate thesis sheds light on the state of conservation practices in the Caribbean during the current climate in hopes to further the study on the best methods of conservation in regions with high probability of disasters. Due to inconsistencies in emergency preparedness in the past, the Caribbean has been relying on response-based conservation in addition to the treatment of cultural heritage from conservators in the islands. The Caribbean's rich culture and history make up the lives of all that identify with the identity. Efforts that go into the preservation of the cultural heritage of the Caribbean region will increase as the field of conservation develops in the region. As more conservation professionals rise from the areas of the Caribbean, there is no doubt the precious cultures of many will prevail in the future for many generations to come.

⁸⁰ Perez d'Ors, Pablo. "Closed since Early 2020, Puerto Rico's Museo De Arte De Ponce Faces Long Road to Reopening." *The Art Newspaper*, December 21, 2021. <https://www.theartnewspaper.com/2021/12/21/puerto-rico-museo-de-arte-de-ponce-closed-since-2020>.

REFERENCES

Alois RIEGL, "Der moderne Denkmalkultus," 1903; reprinted in *Cesammelte Aufsätze* (Augsburg-Vienna: B. Filser, 1929)

Beck, James. "Reversibility, Fact Or Fiction?: The Dangers Of Art Restoration." *Source: Notes in the History of Art*, vol. 18, no. 3, 1999, pp. 1–8. *Jstor* , doi:10.1086/sou.18.3.23205061.

Blankert, Albert. *The Case of Han Van Meegerens Fake Vermeer Supper at Emmaus Reconsidered*. Edited by A. Golahny et al., Amsterdam University Press, 2006.

Cabán, Pedro A. "Puerto Rico: State Formation in a Colonial Context." *Caribbean Studies* 30, no. 2 (2002): 170–215. <http://www.jstor.org/stable/25613375>.

"Center for Science Education." *How Hurricanes Form* | Center for Science Education. UCAR, 2018. <https://scied.ucar.edu/learning-zone/storms/how-hurricanes-form>.

Daley, Michael. "Wibble!" *Artwatch*, The Artwatch UK Journal, 30 Aug. 2012, artwatch.org.uk/tag/barbara-ellen/.

David A. Scott. "Art Restoration and Its Contextualization." *The Journal of Aesthetic Education* 51, no. 2 (2017): 82–104.

<https://doi.org/10.5406/jaesteduc.51.2.0082>.

DeDiego. "Bien Activo El Laboratorio De Conservacion Del MAPR." Web log. *299 De Diego Blog Del MAPR* (blog). MAPR, March 18, 2019.

<https://blog299dediego.wordpress.com/2019/03/18/bien-activo-el-laboratorio-de-conservacion-del-mapr/>.

Ebert, Bettina. "Paper Conservation Techniques." <https://asiarta.org>. Asiarta Foundation, 2014. <https://asiarta.org/introduction-to-conservation/works-of-art-on-paper/paper-conservation-techniques/>.

FELICIANO, H. (2016). The Museum of Art of Puerto Rico, or, the Reconstitution of a History of Art. In Arias F. (Author) & Holo S. & Álvarez M. (Eds.), *Remix: Changing Conversations in Museums of the Americas* (pp. 34-37). University of California Press. Retrieved May 14, 2021, from <http://www.jstor.org/stable/10.1525/j.ctt19rmbt3.10>

Frojmovic, Michel, Jennifer Graeff, and Asad Mohammed. "The Impact of Climate Change in the Caribbean." *Planning and the Climate Change in the Caribbean*. Lincoln Institute of Land Policy, 2013.

<http://www.jstor.org/stable/resrep18430.5>.

Gencer, Ebru A. “An Overview of Urban Vulnerability to Natural Disasters and Climate Change in Central America & the Caribbean Region.” Fondazione Eni Enrico Mattei (FEEM), 2013. <http://www.jstor.org/stable/resrep00980>.

Geoff Burrows. “Rural Hydro-Electrification and the Colonial New Deal: Modernization, Experts, and Rural Life in Puerto Rico, 1935–1942.” *Agricultural History* 91, no. 3 (2017): 293–319. <https://doi.org/10.3098/ah.2017.091.3.293>.

Glowczewska, Klara, et al. “Don't Cry for Notre Dame Cathedral. It Will Never Be the Same, and That's Ok.” *Town & Country*, 23 Apr. 2019, www.townandcountrymag.com/society/tradition/a27210982/notre-dame-cathedral-paris-restoration-history/

Kimball, Edward L. *The Artist and the Forger: Han Van Meegeren and Mark Hofmann*, Vol. 27, No. 4, Brigham Young University Studies (1987), pp. 5-14

Kirsh, Andrea, and Rustin S. Levenson. *Seeing through Paintings: Physical Examination in Art Historical Studies*. Yale University Press, 2002.

“Luis a Ferre Foundation Inc.” Luis A Ferre Foundation Inc - GuideStar Profile, 2022. <https://www.guidestar.org/profile/66-0235625>.

Mckay, ed. “Art Conservation in the Caribbean.” McKay Lodge Conservation Laboratory, November 12, 2018. <https://mckaylodge.com/art-conservation-caribbean/>.

Mercado Oliveras, Verónica. “History of Ponce Art Museum’s Anton J. Konrad Conservation Center Until 1985,” 2018.

Moore, Michelle. “Journal of Conservation and Museum Studies.” *Journal of Conservation and Museum Studies*, Ubiquity Press, 1 Nov. 2001, www.jcms-journal.com/articles/10.5334/jcms.7012/.

Muller, Norman. Slowing the Clock: Art Conservation at the Art Museum. *Record of the Art Museum, Princeton University*, vol. 59, No ½ (2000), pp 2-15

Museo de Arte de Puerto Rico. “Historia Del Mapr.” Historia del MAPR | Museo de Arte de Puerto Rico, 2011. <https://www.mapr.org/es/museo/sobre-el-museo/historia#:~:text=Origen,de%20Arte%20de%20Puerto%20Rico>.

Perez d'Ors, Pablo. “Closed since Early 2020, Puerto Rico's Museo De Arte De Ponce Faces Long Road to Reopening.” *The Art Newspaper*, December 21, 2021. <https://www.theartnewspaper.com/2021/12/21/puerto-rico-museo-de-arte-de-ponce-closed-since-2020>.

Perkinson, Roy, et al. *Defining the Conservator: Essential Competencies*. American Institute for Conservation of Historic and Artistic Works, 2003.

“Photographic Documentation.” *Winterthur Museum, Garden & Library*, Winterthur Museum, Garden & Library, www.winterthur.org/collections/collection-care-conservation/conservation-department/photographic-documentation/.

Plenderleith, Harold J. “A History of Conservation.” *Studies in Conservation* 43, no. 3 (1998): 129–43. <http://www.jstor.org/stable/1506740>.

Roy, Ashok, et al. “Conservation Documentation in Digital Form - A Continuing Dialogue About the Issues.” *Studies in Conservation*, vol. 52, no. 4, 2007, pp. 315–317. *Jstor* , doi:10.1179/sic.2007.52.4.315.

US Department of Commerce, NOAA. “Major Hurricane Maria - September 20, 2017.” Major Hurricane Maria - September 20, 2017. NOAA's National Weather Service, July 13, 2021.
<https://www.weather.gov/sju/maria2017#:~:text=Maria%20formed%20from%20an%20African,to%20September%2017th%2C%202017>.

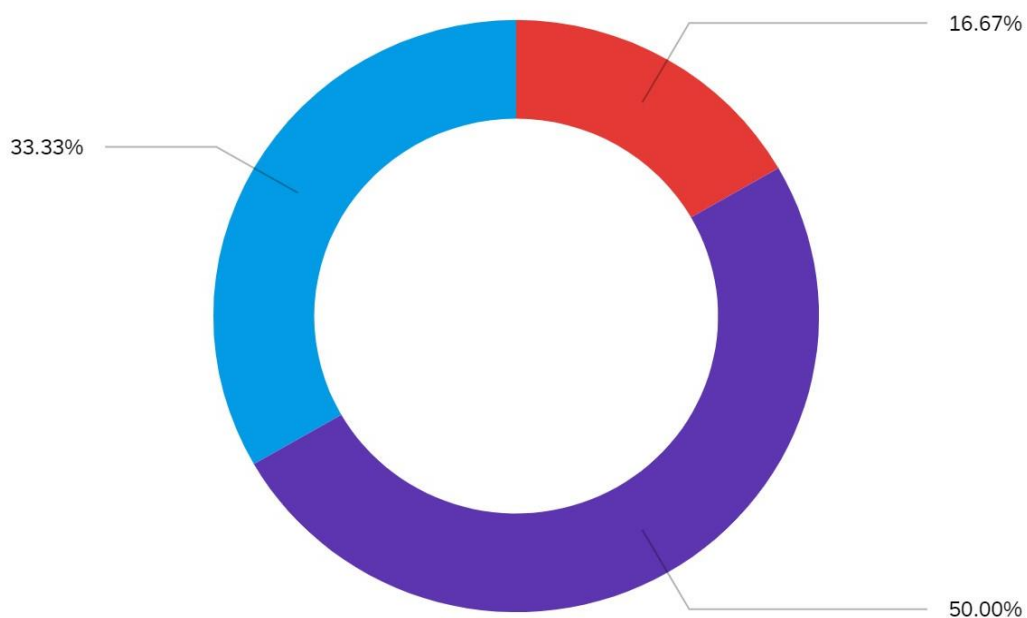
Appendix A

THE SURVEY

A part of this research includes the cultural institutions survey. This survey aimed to collect data on collection of the different cultural institutions in Puerto Rico and the Virgin Islands to understand the kind of objects that they held, the number of objects in their collections, as well as their emergency preparedness plan.

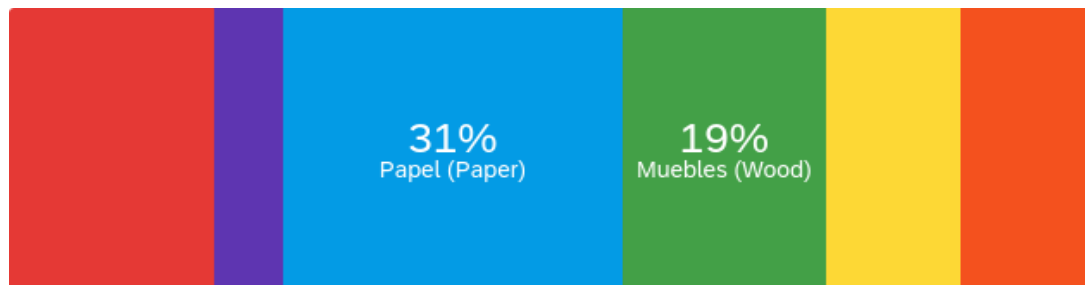
1. ¿Su institución es privada o sin fines de lucros? (*Is your organization profit or non-profit?*)
2. ¿Qué tipo de objetos históricos obtiene su institución? Seleccione todas las opciones que aplican. (*What kind of object does your organization possess? Select all that apply.*)
3. ¿Aproximadamente, cuantos objetos obtiene su institución?
(*Approximately, how many objects are in your collection?*)
4. ¿Su institución tiene profesionales designados a conservación preventiva?
(*¿Si un objeto histórico sufre de daños, quien se encarga de conservarlo?*)
(*Does your organization have a designated collections care staff that engages in preventive conservation? (If an object breaks, who treats it?)*)
5. Seleccione la mejor opción que describa la manera en la cual su institución conserva objetos históricos. (*Which of the following best describes your institution's approach to collections care*)
6. ¿Aproximadamente, cuanto tiempo se dedica a el manejo/cuidado de colecciones en su institución? (*How much time is spent in collections care?*)

7. ¿Cuántas personas están envueltas en el proceso de mantener/cuido de colecciones? (*How many people are involved in this process?*)
8. ¿Su institución tiene un plan de emergencias en caso de desastres naturales? (*Does your institution have an emergency preparedness plan?*)
9. ¿Su institución tiene sistemas de seguridad? Ejemplo: cámaras de seguridad, guardias de seguridad, etc. (*Does your institution have security measures in place to prevent theft? E.g. cameras, security guards, etc.*)
10. ¿Tiene alguna pregunta o preocupación acerca de esta encuesta? (*Do you have any questions/concerns regarding this survey?*)



■ Privada (For Profit)
 ■ Sin fines de lucro (Non-Profit)
 ■ Otro (other)

For profit vs. Non-profit Organizations



■ Pinturas (Paintings)
 ■ Textiles (Textiles)
 ■ Papel (Paper)
 ■ Muebles (Wood)

■ Objetos de plata (Silver)
 ■ Objetos de cristal (Glass)

Number of objects and Object Type