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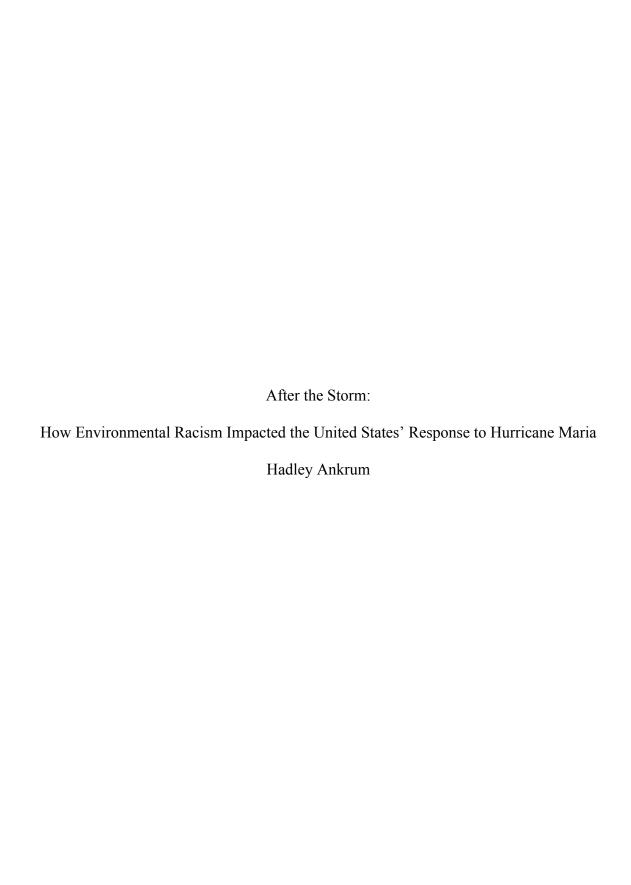
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Abstract

In September of 2017, disaster struck the territory of Puerto Rico when Hurricane Maria made landfall on the island. Although the storm itself caused tremendous damage to both the residents and the environment of Puerto Rico, the inadequate responses of both the United States federal government and local Puerto Rican politicians greatly exacerbated this devastation. This paper examines the efforts of the American government to ameliorate the issues created by the storm through the lens of environmental racism. The introduction will explore the events of the hurricane in order to give the reader context. Chapter 1 draws from the Millennium Ecosystem Assessment and employs data from third-party research organizations and media outlets such as the Washington Post and the Associated Press in order to demonstrate the extent of the wreckage caused by the storm. Chapter 2 explains the theories and research completed in the topics of environmental racism and environmental justice. Chapter 3 then delves into the history of the often contentious relationship between the United States and Puerto Rico in order to contextualize the current situation in the territory. Chapter 4 explores the policies that influenced the United States government's actions following the storm. It also contrasts these decisions with the government's responses to other natural disasters such as Hurricane Irma and Hurricane Harvey. This juxtaposition serves to highlight the underlying racial and political motivations present in the case of Hurricane Maria. Chapter 5 examines the state of the island's current healthcare system as well as the manners in which the United States' actions have affected the health of the Puerto Rican population. In Chapter 6, I offer recommendations based on evidence presented in chapters 2 through 5. While I will not attempt to prove whether or not Hurricane Maria was caused or exacerbated by climate change, several of my suggestions will be based upon the consensus by numerous scientists and meteorologists that the phenomenon is currently

playing a role in the occurrence of Caribbean storms. I will also discuss the role that grassroots movements should play in the environmental justice movement in Puerto Rico. Finally, I will give suggestions on how the United States should proceed in its relationship with the territory and conclude that the United States needs to prove its willingness to provide assistance of all sorts to Puerto Rico if it wishes to maintain control of the island.

Keywords: Environmental racism, Hurricane Maria, Puerto Rico, public health, natural disasters, post-colonialism

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Introduction: The Storm of the Century

On the evening of September 19th, 2017, millions of Puerto Rican residents shuttered their blinds, turned off the lights, and closed their eyes on their beautiful, serene island for the last time. The next day, they awoke to a horrific natural disaster that was sure to impact every aspect of their lives for the next several months, if not for the rest of their lifetime. At 6:15 am local time, Hurricane Maria made landfall onto the southeast coast of Puerto Rico. As the storm made its way across the island, its maximum wind speed was recorded at 155 miles per hour and was considered to be a "high-end category 4 hurricane" for the majority of this journey. No community on the 5,500 square mile island was left untouched; homes were destroyed, ² schools had to be closed for several weeks for repairs, and the nation's infrastructure such as bridges and highways suffered serious damage. The latter issue only exacerbated the devastation, as it made it nearly impossible to send aid to areas in crisis. In addition, citizens had to endure an island-wide power outage and prolonged issues with cellular service⁴; these blackouts markedly complicated rescue efforts and severely jeopardized the lives of those in need of medical assistance. Despite this fact, the Puerto Rican government, supported by United States President Donald Trump, attributed the shockingly low number of 64 deaths to Hurricane Maria. ⁵ For

Views-and-Experiences-of-Puerto-Ricans-One-Year-After-Maria.

¹ Richard J. Pasch, Andrew B. Penny, and Robbie Berg, "Hurricane Maria," *National Hurricane Center*, April 10th, 2018, 1-2, accessed September 10th, 2018, https://www.nhc.noaa.gov/data/tcr/AL152017_Maria.pdf.
² "The Washington Post-Kaiser Family Foundation Survey of Puerto Rico Residents," *The Washington Post*, September 2018, 2, accessed September 29th, 2018, http://files.kff.org/attachment/Topline-and-Methodology-

³ Kavitha Cardoza, "Puerto Rico's Beleaguered Public Schools Face Controversial Reform After Hurricane Maria," *The Public Broadcasting Service*, September 18th, 2018, accessed September 29th 2018, https://www.pbs.org/newshour/show/puerto-ricos-beleaguered-public-schools-face-controversial-reform-after-hurricane-maria.

⁴ Kara Dapena, Daniela Hernandez, and Arian Campo-Flores, "Inside Puerto Rico's Struggle to Recover a Month After Hurricane," *The Wall Street Journal*, October 20th, 2017, accessed September 29th 2018, https://www.wsj.com/articles/inside-puerto-ricos-struggle-to-recover-a-month-after-hurricane-1508491811. ⁵ Sheri Fink, "Nearly a Year After Hurricane Maria, Puerto Rico Revises Death Toll to 2,975," *The New York Times*, August 28th, 2018, accessed October 1st, 2018, https://www.nytimes.com/2018/08/28/us/puerto-rico-hurricane-maria-deaths.html.

many U.S. citizens in Puerto Rico as well as on the mainland, this figure did not correspond with the incredible amount of destruction that the storm had caused. As the months passed, it became clear that they were correct to be suspicious.

In August 2018, almost one year after the storm, The Milken Institute School of Public Health at George Washington University published an extensive report on the mortality rate of Hurricane Maria in Puerto Rico. According to their calculations, 2,975 Puerto Ricans died as a direct or indirect result of the hurricane.⁶ In addition, the report also stated that many of these deaths could have been preventable had the government responded more readily to the disaster.⁷ When comparing the response of the U.S. government to the aftermath of Hurricane Maria to its reaction to other hurricanes on the mainland, it is evident that Puerto Ricans citizens were the victims of environmental racism. While it is certainly understandable that they experienced some hardships as a result of storm, the United States government neglected to provide the territory with the resources necessary to ameliorate the situation in a timely manner. This resulted in thousands of needless casualties.

In this thesis, I will demonstrate that the aftermath of Hurricane Maria was a case of environmental racism by contrasting it with the events of other U.S. hurricanes that occurred in recent years, such as Hurricanes Harvey and Irma. In addition, I will also explore the past and present relations between the United States and Puerto Rico in order to provide context for the U.S. government's response to the storm. Chapter 1 will supply the reader with quantitative information concerning how Hurricane Maria impacted food, water, and disease on the island.

⁶ The George Washington University Milken Institute School of Public Health, Ascertainment of the Estimated Excess Mortality of Hurricane Maria in Puerto Rico (Washington, D.C.: George Washington University Press, 2018), 9, accessed September 10th, 2018,

https://publichealth.gwu.edu/sites/default/files/downloads/projects/PRstudy/Acertainment%20of%20the%20Es timated%20Excess%20Mortality%20from%20Hurricane%20Maria%20in%20Puerto%20Rico.pdf. 7 Ibid.

Chapter 2 will describe environmental racism as a concept in order to provide the reader with appropriate context. Chapter 3 will examine the history of Puerto Rico as a U.S. territory and the ways in which this relationship was a form of colonialism. Chapter 4 will discuss the policies that affected the U.S. government's response to Puerto Rico, and how these actions contrasted with those performed for the aforementioned mainland hurricane. Chapter 5 will delve into the public health crises Puerto Rico faced as a result of the storm, and chapter 6 will conclude with my policy recommendations as to how to prevent a similar case in the future.

Chapter 1: Facts and Figures from Hurricane Maria

In the *Ecosystems and Human Wellbeing: General Synthesis*, The United Nations outlines four principal categories of ecosystem services. The first group is known as supporting services, and include activities such as primary production, nutrient cycling, and soil formation. The second category is provisioning services, and include any material that provides for an organism's basic needs, such as food, fresh water, and fuel. The third group, known as regulating services, encompasses climate, flood, and disease regulation, as well as water purification. The final grouping is known as cultural services, and entails the educational, recreational, aesthetic, and spiritual benefits an ecosystem can provide.⁸

The devastation caused by Hurricane Maria impacted several of these ecosystem services that are typically rendered in Puerto Rico. However, as this thesis examines how humans were directly affected by this natural disaster, it does not assess the damage inflicted on Puerto Rico's supporting services. While this chapter does not specifically address the loss of cultural services, chapter 5 will discuss the negative impact the storm had on mental health, which typically falls

^{8 &}quot;Ecosystems and Human Well-Being: General Synthesis," Millennium Ecosystem Assessment, 2005, vi, accessed September 11th, 2018,

http://www.millenniumassessment.org/documents/document.356.aspx.pdf.

into this category. The island also suffered measurable depletions of its provisioning services, particularly to its food and water resources. Within mere hours, Hurricane Maria destroyed \$780 million worth of crops in Puerto Rico. As this was approximately 80% of the territory's crop value, such a loss is devastating not only for the individual farmers, but for the island's government as well. In addition, it is important to note that only 15% of crops grown in Puerto Rico are exported to other regions. Because of this, the crop loss caused by Hurricane Maria was extremely harmful to the general population of the island as well. Even though 80% of Puerto Rico's food supply is exported from other areas, many of these nations, such as the Dominican Republic, St. Martin's, and Dominica, suffered damage from the storm as well; these losses further minimized the territory's food supply. Been when Puerto Rican citizens were able to obtain food, they could not always properly store it. According to a joint survey conducted by the Washington Post and the Kaiser Family Foundation, 70% of Puerto Ricans who completed the questionnaire said that due to the prolonged power outages on the island, it was often a challenge for them to store and prepare fresh food. 12

In addition to a lack of edible crops on the island, Puerto Ricans also had immense difficulties securing potable water after Hurricane Maria. Over 230 rural communities on the island rely on wells or springs for their water supply, and many of these sources were damaged during the storm.¹³ In the aftermath of the hurricane, 20% of those surveyed reported that they

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⁹ Frances Robles and Luis Ferré-Sadurní, "Puerto Rico's Agriculture and Farmers Decimated by Maria," *The New York Times*, September 24, 2017, accessed September 10th, 2018,

https://www.nytimes.com/2017/09/24/us/puerto-rico-hurricane-maria-agriculture-html?_r=0.

¹⁰ Dan Charles, "How Puerto Rico Lost its Homegrown Food, But Might Find it Again," *National Public Radio*, May 13, 2017, accessed September 10th, 2018,

https://www.npr.org/sections/thesalt/2017/05/13/527934047/how-puerto-rico-lost-its-home-grown-food-but-might-find-it-again.

¹¹ Robles and Ferré-Sadurní.

¹² "The Washington Post-Kaiser Family Foundation Survey of Puerto Rico Residents." pg. 6.

¹³ Sarah Schmidt, "Puerto Rico After Maria: 'Water is Everything,'" *The Washington Post*, September 12th, 2018, accessed September 29th, 2018.

drank from a stream or river due to lack of available clean water.¹⁴ Residents reported still having issues with their water in the summer of 2018, almost one year after the hurricane. At that time, 50% of citizens surveyed stated that there was not enough available drinking water for their households.¹⁵ In addition, 53% of Puerto Rican residents were still wary of the water quality in their homes.¹⁶ Despite this, the Puerto Rico Aqueduct and Sewer Authority stated that approximately 99% of their clients had good service by August 2018. However, the remaining 1% translates to about 8,000 families without water. The former percentage also does not account for rural families, many of which are not serviced by the Aqueduct and Sewer Authority and could therefore still be facing difficulties obtaining clean water. As of August 2018, 27 municipalities in Puerto Rico were still relying on water pumps powered by emergency generators.¹⁷

The potable water crisis experienced by Puerto Rico after Hurricane Maria not only affected the island's provisioning services, but its regulating services as well. Specifically, the territory was faced with potential outbreaks of communicable diseases due to a lack of clean drinking water. A month after the hurricane, 20 of Puerto Rico's 51 sewage treatment plants were still not operational, causing much of the untreated water to flow into nearby streams and rivers. These massive leaks were determined to be the origin of a leptospirosis outbreak. In the weeks after the storm, ten residents of Puerto Rico became infected with leptospirosis, and four

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 $https://www.washingtonpost.com/news/national/wp/2018/09/12/feature/water-is-everything-but-for-many-in-puerto-rico-it-is-still-scarce/?noredirect=on\&utm_term=.ea3741993c94.$

¹⁴ "The Washington Post-Kaiser Family Foundation Survey of Puerto Rico Residents," 6.

¹⁵ Schmidt.

¹⁶ "The Washington Post-Kaiser Family Foundation Survey of Puerto Rico Residents," 7.

¹⁷ Schmidt

¹⁸ Michael Melia, "Raw Sewage Contaminating Waters in Puerto Rico After Maria," *The Associated Press*, October 16th, 2017, accessed September 29th, 2018,

https://www.apnews.com/fc9e9238f77e4053a02832040ba0ea97/Raw-sewage-contaminating-waters-in-Puerto-Rico-after-Maria.

died as a result of the disease. 19 The number of suspected cases of the disease was eventually stated to be 74 by the office of Ricardo Roselló Nevares, the governor of Puerto Rico.²⁰ Following this announcement, CNN performed an investigation on the number of deaths caused by leptospirosis and eventually found that 22 additional deaths had been attributed to the disease by the Puerto Rico Demographic Registry. However, these were not counted in the final death toll as many of the individuals died after October 20th, which is the date that the Puerto Rican government ceased to attribute leptospirosis deaths to Hurricane Maria. Still, it is important to note that experts who have reviewed the data believe that such a high number of leptospirosis deaths is unusual.²¹ Although the exact number of leptospirosis-related deaths that were caused by Hurricane Maria is unclear, it is certain that the storm had a tremendous impact on the spread of the disease.

Chapter 2. Environmental Racism: A Brief Primer

In order to fully understand the social ramifications of the United States' response to Hurricane Maria, it is necessary for the reader to have a basic knowledge of two key concepts: environmental justice and environmental racism. Defining these two terms is a rather challenging task; it has been noted that because these phrases have not been given conclusive definitions, different scholars and environmental organizations have designated their own meanings for them. This has led to much ambiguity in the field.²² Seeking to remedy this issue, in 2000 the

¹⁹ Michael Melia, "Puerto Rico Investigates Post-Hurricane Disease Outbreak," October 11th, 2017, accessed

September 29th, 2018, https://www.apnews.com/854bcfca40e74ef69eb8e5c1e907ab5b.

20 "Gobernador Rosselló Nevares logra establecer iniciativas para continuar la recuperación de la Isla," *La Fortaleza*, October 23rd, 2017, accessed October 2nd, 2018, https://www.fortaleza.pr.gov/content/gobernadorrossell-nevares-logra-establecer-iniciativas-para-continuar-la-recuperaci-n-de-la.

²¹ John D. Sutter and Omaya Sosa Pascual, "Deaths from Bacterial Disease in Puerto Rico Spiked After Maria," *Cable News Network*, July 3rd, 2018, accessed October 2nd, 2018, https://www.cnn.com/2018/07/03/health/sutter-leptospirosis-outbreak-puerto-rico-invs/index.html.

²² Ryan Holifield, "Defining Environmental Justice and Environmentalism," *Urban Geography* 22, no.1 (2001): 78, accessed October 15th, 2018,

https://www.researchgate.net/profile/Ryan Holifield/publication/250171256 Defining Environmental Justice

U.S. Environmental Protection Agency (EPA) released a definition for the term "environmental justice," which is reprinted below:

The goal of environmental justice is to ensure that all people, regardless of race, national origin or income, are protected from disproportionate impacts of environmental hazards. To be classified as an environmental justice community, residents must be a minority and/or low income group; excluded from the environmental policy setting and/or decision-making process; subject to a disproportionate impact from one or more environmental hazards; and experience a disparate implementation of environmental regulations, requirements, practices and activities in their communities.²³

While some members of the environmental justice community were pleased to finally have an official definition, others believed it was too technical. At this time, the latter group advocated for environmental justice in cases that were not directly based in environmental science, such as indigenous land rights. As the EPA's definition focused on more scientific issues, primarily pollution, many activists felt as though the definition of environmental justice should be broadened to include social issues in addition to scientific ones. The EPA has since amended their definition, which currently reads, "Environmental justice is the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income, with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies." Despite this change, some critics believe that a precise definition for environmental justice is impossible to find, as the term can encompass different meanings

_and_Environmental_Racism/links/5694093108ae425c6896255b/D efining-Environmental-Justice-and-Environmental-Racism.pdf.

²³ Holifield, 80-81.

²⁴ "Environmental Justice," *The U.S. Environmental Protection Agency*, n.d, accessed October 15th, 2018, https://www.epa.gov/environmentaljustice.

depending on the situation.²⁵ While I concur that the significance of the phrase can change based on the context, the current EPA definition for environmental justice is broad enough for the purposes of this thesis and will be the point of reference whenever the term is used.

The phrase "environmental racism" contains even more ambiguity than "environmental justice," as the government has never given an official definition for the former. ²⁶ However, Rev. Benjamin Chavis, who originated the term in the 1980s, has defined it as:

Environmental racism is racial discrimination in environmental policy-making and enforcement of regulations and laws, the deliberate targeting of communities of color for toxic waste facilities, the official sanctioning of the presence of life threatening poisons and pollutants for communities of color, and the history of excluding people of color from leadership of the environmental movement.²⁷

This definition has caused some controversy within the environmental activism community, particularly the phrase "deliberate targeting." This choice of words has led some to believe that in order for a case to be considered an example of environmental racism, malicious intent of those responsible for the pollution must be proven. Conversely, others believe that this intent is irrelevant, and that any system that places environmental burdens on people of color is inherently racist.²⁸ I agree with the latter interpretation, and will be using this lens when referring to environmental racism in this thesis. However, it is important to note that the above definition only views environmental racism within the context of various types of pollution. I firmly believe that this definition should be broaden to include a plethora of environmental issues, including responses to natural disasters such as hurricanes. Therefore, I will apply the framework

²⁵ Holifield, 82-83. ²⁶ Holifield 83.

²⁸ Ibid.

of environmental racism throughout this paper in an effort to prove that the term can and should be applied to other environmental situations.

As these phrases have been appropriately clarified, it is also necessary to highlight the research that supports them. Since the 1980s, numerous studies have been completed in order to verify the existence of environmental racism.²⁹ Hundreds of statistics were collected, and nearly all of them supported the idea that the burden of environmental pollution tends to fall on people of color, while white people reap the benefits of the processes that cause such contamination. Excellent examples of such disparities are found in the groundbreaking research of EPA enforcement of its Superfund Sites. 30 Conducted by *The National Law Journal*, this study contains several staggering statistics. For instance, it was found that sites near the largest population of whites were penalized 500% higher than sites near the largest population of people of color. In addition, it was stated that "[f]or minority sites, EPA chooses 'containment', the capping or walling off of a hazardous waste site, 7% more frequently than the cleanup method preferred under the law: permanent 'treatment' to eliminate waste or rid it of its toxins. For white sites, EPA orders permanent treatment 22% more often than containment." This data is only a small portion of an immense collection that shows a prejudice against minority communities in terms of pollution; yet there are still critics who claim that this increased amount of toxic exposure exhibited by the data could simply be due to class instead of race.³² However, this theory has been disproven time and time again by research. In fact, most studies take into

²⁹ Laura Westra and Peter S. Wenz, "Introduction," in *Faces of Environmental Racism: Confronting Issues of Global Justice*, eds. Laura Westra and Peter S. Wenz (Lanham, Maryland: Rowman and Littlefield Publishers, Inc., 1995), xv.

³⁰ Robert D. Bullard, "Decision Making," in *Faces of Environmental Racism: Confronting Issues of Global Justice*, eds. Laura Westra and Peter S. Wenz (Lanham, Maryland: Rowman and Littlefield Publishers, Inc., 1995), 3.

³¹Bullard, 5.

³² Westra and Wenz, xv.

account both poverty and race and have proven that race is a stronger determining factor.³³
Sociologist Robert D. Bullard has identified three categories that are violated when environmental racism occurs. The first of these concepts is Procedural Equality, which is defined as the unprejudiced application of government regulation and enforcement.³⁴ The aforementioned example of Superfund sites would be considered a violation of this category, as regulations were not followed equally between white communities and communities of color. The second violated principle is Geographic Equality, which refers to an equal distribution of toxic waste hazards and other areas of pollution. It has been demonstrated through numerous pieces of data that these pollutants are significantly more prevalent in communities of color than in predominantly white areas.³⁵ According to a report from Greenpeace, communities that possess incinerators are 89% more populated with people of color than the national average.³⁶
The final category of violation is Social Equality. This is simply the idea that by committing acts of environmental racism, the government or corporations are relegating people of color to a lesser position in society.³⁷

Based on the definitions outlined above, it is evident that the people of Puerto Rico were victims of environmental racism during the aftermath of Hurricane Maria. As will be demonstrated in the following two chapters, Puerto Rican officials were given very little say in the legislation and policy for various political procedures, including those related to disaster relief. As a result, a disproportionate amount of harm befell island residents, particularly when compared with those who were affected by Hurricanes Harvey and Irma on the mainland.

³³ Ibid.

³⁴ Bullard, 5.

³⁵ Bullard, 6.

³⁶ Ibid.

³⁷ Bullard, 8.

Finally, as the health and infrastructural impact of the storm was felt for a much more extended period of time in Puerto Rico than in other parts of U.S. affected by hurricanes, such as Texas or Florida, it is clear that United States government willfully neglected Puerto Rico during and after the natural disaster, which should certainly be classified as a case of environmental racism. The following chapter will examine the contentious history between Puerto Rico and the U.S., and how this complicated relationship foreshadowed the events during and after Hurricane Maria.

Chapter 3. Quasi-Colonialism: A History of Puerto Rican-U.S. Relations

While it may seem as if the aftermath of Hurricane Maria caused a rift between Puerto Rico and the United States, in reality the storm only increased the strain in a relationship which has always been contentious. Since Christopher Columbus landed on the island in 1493, Puerto Rico has consistently remained a colony of other nations and has yet to have been given full license to rule itself. It continued under Spanish rule for the next 400 years until the United States invaded the island on July 25th, 1898, toward the end of the Spanish-American War. Soon after, Puerto Rico became the "political ward" of the U.S.; however, this turn of events was not part of the American government's initial plans for the war. Although the U.S. had entered into the war over disagreements concerning Spain's rule of Cuba, the smaller island of Puerto Rico began to catch the eyes of key political figures in the months before the invasion. Although the U.S. primary exports was sugar, American politicians believed control over the island would allow them wean themselves off of their dependency on other nations for the crop.

³⁸ "Puerto Rico," Yale University Genocide Studies Program, n.d. Accessed November 4th, 2018.

³⁹ Pedro A. Cabán, *Constructing a Colonial People: Puerto Rico and the United States, 1898-1932* (Boulder, Colorado: Westview Press, 1999), 1.

⁴⁰ Raymond Carr, *Puerto Rico: A Colonial Experiment* (New York: New York University Press, 1984), 20-21.

⁴¹ Cabán, 32.

⁴² Cabán, 16.

Rico's location in the Caribbean piqued the interests of naval expansionists, who had been tirelessly searching for a way to expand their influence in a region exclusively held by European powers. Beyond these political interests, much of the American public viewed themselves as liberators and believed that they were rescuing Puerto Rico from the archaic monarchal system imposed upon them by Spain. Because of this notion, the American people did not view the invasion of Puerto Rico as colonialization. However, it was clear to Puerto Ricans in the 19th century as well as most modern scholars that the territorial acquisitions that the United States attained during the Spanish-American War, including that of Puerto Rico, signaled its transition from fledgling nation into an imperial power. 44

The United States' unfamiliarity with the procedure of colonization is evident when looking at its early reign in Puerto Rico. After officially becoming the sovereign of Puerto Rico due to the Treaty of Paris in 1898, the U.S. rolled out a string of harsh policies for the island, including censorship of the press. ⁴⁵ In addition, the United States government engaged in a process deemed "Americanization," which consisted of changing the political and judicial structure in Puerto Rico in order to implement democratic principles. ⁴⁶ However, the results were less than desirable for both parties; as much of the legislation enacted during this time was based on American institutions and values, it did not function well in Puerto Rico. This left Puerto Rican citizens feeling understandably dissatisfied with their government. Less than two years after the initial invasion of the U.S., Puerto Rican political figures formally demanded territorial status from Congress. ⁴⁷ In addition to the overall frustration felt by Puerto Rican citizens toward

⁴³ Carr, 25.

⁴⁴Carr, 22-24.

⁴⁵ Carr, 32

⁴⁶ Cában, 122.

⁴⁷ Carr, 32-33.

the U.S. government, the reasons behind their status request were twofold. First, Puerto Rico was to be included in the U.S. tariff system in order to expand the island's economy. Second, they believed that the upgrade to territorial status would symbolize a promise from the U.S. for eventual statehood, which was the ultimate goal for many Puerto Ricans. 48 While this may sound like a rather reasonable request, it launched Congress into a polarizing battle over the reach of the Constitution. If Puerto Rico was to be granted territorial status, this would also suggest that they would be given the constitutional rights endowed to all Americans, including citizenship. While this idea was supported by the majority of Democrats in Congress, it was firmly rejected by the Republicans, who believed that the Constitution did not necessarily apply to areas that the United States had conquered. 49 In addition to these differences in political ideologies, racist attitudes were another unfortunate aspect of the territorial debate. During this era, many politicians subscribed to the philosophy of Anglo-Saxon superiority, and were not hesitant to apply it to the situation in Puerto Rico and elsewhere. Both Democrats and Republicans recognized that any changes made to the status of Puerto Rico would also have to be applied to the Philippines, another U.S. acquisition from the Spanish-American War. Some politicians were in favor of granting citizenship to Puerto Ricans, due to the fact that much of the population was considered to be white. However, they fiercely opposed the idea of Filipino people obtaining citizenship, as they were people of color and therefore, in the eyes of certain congressmen, unwanted in the United States. 50 In addition, there were a group of congressmen who did not wish to let either group of people gain citizenship simply due to their race. Democratic Senator George Gilbert voiced his opinion on the matter when he declared, "I am opposed to increasing

⁴⁸ Carr, 33. ⁴⁹ Carr, 34.

⁵⁰ Carr, 35.

the opportunities for the millions of Negros in Puerto Rico and the 10,000,000 Asiatics in the Philippines of becoming American citizens and swarming into this country and coming in competition with our famers and mechanics and laborers."⁵¹ Despite the multitude of opinions, Congress eventually reached a decision on the status of Puerto Rico. Through the Foraker Act, Puerto Rico became the first unincorporated territory of the United States in 1900.⁵²

Although at first glance this resolution might have looked like a victory for Puerto Rico, in actuality the U.S. benefitted much more from its passing. The status of "unincorporated territory" was specifically designed to appease the people of Puerto Rico whilst still denying them U.S. citizenship or protection under the Constitution.⁵³ It addition, it allowed the United States to set up a government on the island in which Puerto Ricans themselves could have little involvement. This new system mainly consisted of a governor and the Executive Council, the latter of which had the majority of the control over the island.⁵⁴ For the first half of the 20th century, the members of the executive council as well as the governor were appointed by the U.S. government. 55 This became increasingly problematic, particularly due to the fact that the majority of these political leaders were unwilling to learn the language or the culture of the people they were serving. One notable exception was Theodore Roosevelt, Jr., who served as governor of Puerto Rico from 1929-1932.⁵⁶ Roosevelt was openly critical of his predecessors as well as his contemporaries, once stating, "Most of the men who filled executive positions in Puerto Rico were there from the United States, with no previous experience whatsoever, speaking not a word of Spanish. Most of them had no conception either of Spanish culture or

⁵¹ Cabán, 88.

⁵² Carr, 36.

⁵³ Ibid.

⁵⁴ Carr, 41.

⁵⁵ Carr, 37.

⁵⁶ Carr, 57.

temperament. Most of them never learned to speak Spanish fluently, and many of them never learned to speak Spanish at all."⁵⁷ Naturally, this communicative barrier immensely hindered the members of the Executive Council from effectively serving the islanders. Because the majority of Puerto Ricans did not begin to learn English until the 1930s, neither the politicians nor the people of Puerto Rico could communicate with one another. This led to the members of the Executive Council to base all of their policy decisions of input from American residents of the island, despite the fact that they were the overwhelming minority. ⁵⁸ Due to this turn of events, the people of Puerto Rican now lacked representation on the island their ancestors had called home for centuries. In addition, they were unable to govern themselves yet were not granted citizenship to the nation which ruled their governing body. This tragic reality led one democratic congressman to remark, "[The Puerto Rican is] a man without a country. Can any man conceive of a more tyrannical form of government?"⁵⁹

Despite U.S. politicians' ambivalence toward their culture, Puerto Ricans received a considerable political advancement in the form of the Jones Act of 1917. This piece of legislation finally granted Puerto Ricans U.S. citizenship, thereby realizing a dream that many islanders had since the U.S.' invasion almost 20 years prior. In addition to citizenship, the act also gave Puerto Rico a limited amount of power to govern itself. While this legislation may appear beneficial for the people of Puerto Rico, it was instead both a cultural and political hindrance for those who wished to maintain their Puerto Rican identity. Since the islanders were officially American citizens, the concept of Puerto Rican citizenship ceased to exist. Whether intentional

⁵⁷ Carr, 40.

⁵⁸ Carr, 41.

⁵⁹ Carr, 36.

⁶⁰ Carr, 52.

⁶¹ Cabán, 198.

⁶² Ibid.

or not, this was yet another example of the U.S. government stripping Puerto Ricans of their cultural identity. In addition, those who wished for Puerto Rican independence were also displeased by the act, as it signaled a deeper, more complex attachment to the United States that would make complete autonomy much more challenging to obtain. But perhaps the most frustrating aspect of the Jones Act was that despite the fact that the islanders were now U.S. citizens, they were not guaranteed the constitutional rights that citizens on the mainland enjoyed. Instead, the act contained a modified Bill of Rights that gave Puerto Ricans only a fraction of the liberties compared to those held by U.S. citizens. For instance, while the islanders were given the ability to vote for a single representative in Congress, this delegate was not permitted to vote on any issue brought to the floor. Limitations such as these left many Puerto Ricans feeling unrepresented and undervalued in the new nation to which they supposedly belonged.

Tensions between the territory and the United States continued throughout the next decade and were only exacerbated when Puerto Rico was plunged further into poverty during the 1930s. Interestingly, this was mainly due to a major hurricane that ripped through the island in 1929 and destroyed many of the crops on which the Puerto Rican economy depended. Although Governor Roosevelt Jr. attempted to raise awareness in the U.S. of the plight the islanders were facing, legislative officials did little to nothing to alleviate this immense poverty. In fact, it was not until Roosevelt Jr.'s distant cousin, Franklin Delano Roosevelt, took office as president that a major figure in U.S. politics attempted to provide some relief to Puerto Rico. Roosevelt himself received much of the information about the status of the islanders from his

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⁶³ Carr, 53.

⁶⁴ Cabán, 205.

⁶⁵ Carr, 53.

⁶⁶ Carr, 57.

wife, Eleanor.⁶⁷ Her interest was piqued after a visit to the territory in 1934, where she witnessed the truly terrible conditions that some of the island's poorest residents were forced to endure. Deeply affected by this experience, Eleanor continued to monitor the situation from the States and reported her findings to her husband, who subsequently became much more knowledgeable than his forbears about living conditions in Puerto Rico.⁶⁸ It was because of this noticeable interest in the welfare of the island that many believed that Roosevelt's New Deal would offer some relief to struggling Puerto Ricans. However, due to oppositions about implementing the plan from Congress as well as the Puerto Rican government, the New Deal was not put into effect on the island.⁶⁹

The relationship between the U.S. and its unincorporated territory failed to improve as the 1930s progressed; by the middle of the decade, Puerto Ricans belonging to both Liberal and Republican parties were supportive of independence. A revolt seemed eminent, as the majority of islanders were distrusting of the U.S. government and uprisings and demonstrations led by the Nationalist party heightened the demand for independence. Due to these sentiments voiced by the Puerto Rican public, Senator Millard Tydings proposed a bill that would have allowed Puerto Rico to vote on its independence. While such a vote was debated greatly on the island, local legislators ultimately decided that ties to the United States were still necessary in order to lift Puerto Rico out of poverty, and thus the vote never came to fruition.

Surprisingly, the threat of mutiny that seemed to loom over the island in the 1930s seemed to all but fizzle out during the next decade. According to author Raymond Carr, the

⁶⁷ Ibid.

⁶⁸ Carr, 58.

⁶⁹ Carr, 59-61.

⁷⁰ Carr, 61.

⁷¹ Carr, 62-63.

period of 1941-1948 was the final phase of classic colonialism in Puerto Rico. 72 During this time, the Puerto Rican economy was stimulated by revenue from World War II as well as the booming rum business, which was then used to set up new industries on the island.⁷³ The rather rapid improvement of the economy signaled the beginning of a "peaceful revolution" in Puerto Rico. Residents of the island began to engage more with their own politics beyond the call for independence. ⁷⁴ Due to demand for soldiers, migration within the island from rural to urban areas increased and the territory was modernized as a result. As scores of able-bodied men left home to fight in the war, Puerto Rican women stepped up to take their place in the workforce. 75 However, to say that the industrialization of the island was solely propelled by Puerto Rican residents would be misguided. In reality, private American investors funded a significant amount of new businesses on the island in the post-war era. This sudden boom was due to an agreement with Congress, which stated that companies that were founded and operated in Puerto Rico were not required to pay local taxes for the first decade of their existence. ⁷⁶ This incentive revealed itself to be quite the double-edged sword; while it undoubtedly aided Puerto Rican economic prosperity, the agreement also further entangled the island with the United States. In addition to the economy, progressive beliefs concerning the fate of the island territory also flourished in U.S. during this period; in 1943, a presidential committee proposed that Puerto Rico should be allowed to elect its own governor.⁷⁷ This led to the Elected Governor Act in 1946, the same year

⁷² Carr, 65.

⁷³ Ibid.

⁷⁴ Carr, 65-67

⁷⁵ Ángel Collado-Schwarz, *America's Last Colony: Puerto Rico* (Syracuse, New York: Syracuse University Press, 2012), 11.

⁷⁶ Carr, 74

⁷⁷ Carr, 68-71.

that Jesús T. Piñero, the first governor of Puerto Rican descent, was appointed.⁷⁸ Two years later, Luís Muñoz Marín became the first elected governor of the island.⁷⁹

While the 1940s were a period of relative peace in the territory, the political and economic gains made by Puerto Rico during this time did little to placate citizens' underlying desire for independence. Soon after the end of World War II, residents of the island called for the United States to begin the process of decolonization. Congress, however, was wholly unwilling to discuss the matter; legislators claimed they were too preoccupied with the impending Cold War to even consider the topic of Puerto Rican independence. 80 Newly elected governor Muñoz Marín was tasked with finding a compromise with the United States that allowed Puerto Rico to distance itself politically while still maintaining its economic relationship that had caused the island to prosper tremendously.⁸¹ His solution came in the form of an entirely new state-territory hybrid known as a "commonwealth." While this term had previously been used in the technical names of four U.S. states, as well as several British territories, the conditions devised by Muñoz Marin of the updated relationship between the United States and its territory would be completely unique to Puerto Rico. 82 According to Muñoz Marín's vision, the Puerto Rican government would be allowed to write its own constitution, which would then be approved by Congress. 83 Such a measure would finally grant Puerto Ricans significant control over their own laws and was more closely aligned to the legislative process of the states than the system that Puerto Rico had been subjugated to since the Jones Act of 1917.

⁷⁸ Collado-Schwarz, 11

⁷⁹ Ibid.

⁸⁰ Ibid.

⁸¹ Carr, 74.

⁸² Carr, 81.

⁸³ Carr, 77.

As residents of the island were still split in the debate of independence versus statehood, there was plenty of criticism of Muñoz Marín's commonwealth plan. The primary concern was that this concept was simply a new name for the existing relationship between Puerto Rico and the U.S., and little would actually improve in the way of Puerto Rican autonomy. 84 This apprehension was not without merit; the House Committee Report on the Commonwealth Bill stated that "this bill under consideration would not change Puerto Rico's fundamental political social and economic [sic] relationships with the United States."85 Puerto Ricans were given the opportunity to voice their opinions about the proposed commonwealth when a referendum occurred on August 30th, 1950, 86 Nationalists, who strongly opposed the idea of Puerto Rico as a commonwealth, staged protests that quickly turned violent as 27 people died as a result.⁸⁷ Despite the Nationalists' fervent attempts to dissuade the public from the Commonwealth, the referendum passed with just over 75% of the vote in favor. 88 However, this statistic alone does not paint an accurate picture of the level of Puerto Rican support the Commonwealth received. It was revealed shortly after the referendum that on 65.08% of eligible Puerto Ricans voted, which meant that only 49.76% of voters demonstrated approval for the Commonwealth. 89 These figures clearly demonstrate that the idea of a commonwealth was still an immensely divisive issue on the island in the early 1950s, much more so than the initial referendum results would lead one to believe.

⁸⁴ Carr, 77.

⁸⁵ Ibid.

⁸⁶ Carr, 78.

⁸⁷ José Trías Monge, *Puerto Rico: The Trials of the Oldest Colony in the World*, (New Haven, Connecticut: Yale University Press, 1997), 113-114.

⁸⁸ Carr, 78.

⁸⁹ Ibid.

Puerto Rico's status was officially changed from unincorporated territory to Commonwealth on July 25th, 1952, 54 years to the day of the United States' invasion. 90 In Spanish, Puerto Rico's new title was translated to "Estado Libre Asociado", or Associated Free State. While this term was created to emphasize the island's supposed newfound agency in their relationship with the United States. 91 the different connotations that can be derived from this title versus those of the English one serve as an excellent metaphor for the different expectations each party had of the new agreement. Soon after the Commonwealth system was implemented, it began to show its weaknesses. Federal agencies still imposed their domain on the island, and without the power to appoint these employees. Puerto Rico had little say in their activities. 92 The main issue of the Commonwealth title was that neither side was certain of what liberties it entailed. The vague wording of its bill made it nearly impossible to concretely define its status in legislative terms. 93 In some instances, Puerto Rico was given powers similar to that of a state, while in others it was only relegated to territory status. 94 The change in status did allow the Puerto Rican government to create their own constitution, which legislators began drafting almost immediately after the passage of the referendum. The first draft contained a progressive Bill of Rights that included benefits for pregnant women and the unemployed as well as free education and the right to work for all. 95 Congress, claiming that such freedoms were not in line with American traditions, refused to approve the draft and made significant edits. 96 The failed Puerto Rican Bill of Rights exemplifies the paradox that existed between the United States and

⁹⁰ Carr, 80.

⁹¹ Ibid.

⁹² Carr, 82.

⁹³ Carr, 84.

⁹⁴ Trías Monge, 119.

⁹⁵ Trías Monge, 117.

⁹⁶ Carr, 79.

the Commonwealth during this time; the former wanted the latter to adhere to its customs, yet was unwilling to fully integrate it into the nation and offer it full political and economic protection.

The island's status became further muddled after a series of decolonization proceedings at the United Nations in 1953. Puerto Rico initially petitioned the UN to begin the process, while the United States staunchly objected, insisting it was solely their decision if or when decolonization occurred. However, the U.S. eventually agreed, as they were extremely reluctant that their current relationship with P.R. continued to be labeled as "colonial," despite the fact that they refused to grant the island practically any self-determining power. 97 Throughout the hearings, confusion continued over whether or not Puerto Rico should be considered a colony by the UN due to the vague nature of its commonwealth status and the inability of the United States and Puerto Rico to reach an agreement on its meaning. 98 Despite this uncertainty, the UN General Assembly eventually voted that they would cease to consider Puerto Rico as a "non-selfgoverning" entity. 99 However, when examining the power the U.S. still wielded over the island, this term is clearly an inaccurate way to refer to Puerto Rico; U.S. federal law was still in effect in the Commonwealth, and any amendments to the Constitution drafted by the Puerto Rican government had to be approved by Congress.

Criticism aimed at the ambiguity of the commonwealth status was steady from several Puerto Rican parties throughout the 1950s, and as a result the United States-Puerto Rico Commission on the Status of Puerto Rico was formed in the early 1960s. 100 The Commission was tasked with investigating the economic, political, and cultural implications of three potential

Trías Monge, 122.Trías Monge, 121.

⁹⁹ Trías Monge, 124.

¹⁰⁰ Trías Monge, 129.

options: independence, statehood, and a more clearly defined Commonwealth. 101 The results of the investigation concluded that while all three options were valid, there would be higher economic consequences of statehood. This was due to the fact that Puerto Rico would have to pay more federal taxes that it would receive federal aid, resulting in an \$18 million difference per vear. 102 The Commission stated that while Puerto Rico was not currently financially ready for statehood, it would be by 1980, less than 20 years in the future. 103 Satisfied by the thoroughness of the report, the U.S. government approved for a plebiscite that would supposedly allow Puerto Rican residents to determine the next steps of their relationship. 104 However, each option relied on the action of Congress, so none of them were even guaranteed to occur. 105 This sense of futility, combined with the fact that the FBI and CIA were both stationed on the island and could therefore manipulate the results of vote, led the Puerto Rican Independence Party (PIP) to protest the plebiscite and discourage its members from voting. 106107 This decision greatly impacted the results of the plebiscite, as the votes for independence polled at less than one percent. 108 Meanwhile, the vote for a clearly-defined Commonwealth won with 60%, and statehood received 40% in addition to winning nine districts on the island. 109

The notable amount of support received by the statehood option signaled a considerable shift in political opinion in Puerto Rico. This was demonstrated yet again when the New Progressive Party (PNP), which was in favor of statehood, won the governor's seat in 1968. 110

¹⁰¹ Carr, 84-86.

¹⁰² Carr, 87.

¹⁰³ Carr, 88.

¹⁰⁴ Trías Monge, 130.

¹⁰⁵ Carr, 90.

¹⁰⁶ Carr, 89

¹⁰⁷ Trías Monge, 131.

¹⁰⁸ Carr, 90-91.

¹⁰⁹ Ibid.

¹¹⁰ Trías Monge, 130.

Shortly after, new governor Luis A. Ferré partnered with President Nixon to create a committee to investigate the impact of Puerto Rico residents voting in presidential elections. While the committee suggested that such a policy could be implemented successfully, nothing ever came of it. 111 By the 1970s, very little headway had been made in more precisely defining the island's commonwealth status. Because of this, discussions of a new compact between the United States and Puerto Rico that would finally clarify the present relationship began in 1975. 112 The proposed compact was intended to grant the island a new set of powers, including the ability to levy tariffs and determine its own minimum wage. In addition, it would also give Puerto Ricans a right that they had been asking for since the beginning of the century: representation in both houses of Congress. Finally, the compact would also ensure that federal laws would only apply to Puerto Rico if they specifically mentioned the island, and Puerto Rico would have the power to formally oppose any laws that they believed would not benefit the Commonwealth. 113 Unfortunately, the compact was never realized due to several factors. First, the PNP retook the governor's seat in 1976, after briefly losing it to the Popular Democratic Party, who was in favor of the preservation of the Commonwealth. 114 As members of the PNP advocated for statehood, they had no interest in redefining the compact. In addition, President Ford suddenly announced intentions to create a bill for Puerto Rican statehood, and in doing so ignored the compact recommendations completely. The bill did not make much progress in Congress, leaving Puerto Rico's status as ambiguous as before. 115 Because of these events, the Commonwealth failed to improve in any meaningful way, thus rendering the results of the plebiscite useless. It is now

¹¹¹ Trías Monge, 131.

¹¹² Carr, 94.

¹¹³ Carr, 95.

¹¹⁴ Ibid.

¹¹⁵ Ibid.

evident that Congress did not act with the opinions of Puerto Rican voters in mind after the plebiscite; the voting process was simply a way for the United States to justify its ownership of the island under the guise of democracy.

The indifference to Puerto Rico's vague status continued into the 1980s. During the case Harris v. Rosario (1980), the Supreme Court declared that Puerto Rico was a "territory belonging to the United States and [Congress] may treat Puerto Rico differently from the states as long as there is a rational basis for its actions." ¹¹⁶ Despite this, there was also growing support for the statehood movement, both on the island and the mainland. Both George H.W. Bush and Ronald Reagan supported statehood during the 1980 presidential election, ¹¹⁷ and PNP candidate Pedro Rosselló won the gubernatorial election in the early 1990s. 118 Energized by this response. the new governor ordered a second status plebiscite in 1993. While statehood again lost to preserving the Commonwealth, the margins were much closer this time. The Commonwealth won with 823,258 votes and statehood received 785,859 votes, giving the two options a two percent difference. 119 As 73.6% of the voting population showed up to the polls, 120 it is clear that more and more Puerto Ricans were becoming increasingly vocal of their preference for the more just and defined relationship of statehood. Roselló continued his platform of statehood throughout his gubernatorial career; one of his principle initiatives while in office was advancing legislation that would foster statehood. 121 Although it seemed as if the PNP was making headway in their efforts to gain statehood status, the party suffered a significant blow at the end of the

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¹¹⁶ Carr, 101.

¹¹⁷ Carr, 99.

¹¹⁸ Trías Monge, 131.

¹¹⁹ Trías Monge, 135.

¹²⁰ Ibid

¹²¹ César J. Ayala, and Rafael Bernabe, *Puerto Rico in the American Century: A History Since 1898* (Chapel Hill, North Carolina: The University of North Carolina Press, 2007), 291.

decade due to a series of consecutive corruption scandals that ended with the incarceration of several prominent PNP mayors and legislators. 122 Due the widespread misconduct occurring in the party, the PNP lost the 2000 gubernatorial election, and PPD candidate Sila Calderón served in the position for the next four years. During this time, Calderón failed to effect any significant amount of change, and the guest for statehood from the PNP remained at bay. 123

The two most recent referendums regarding the status of Puerto Rico have demonstrated a noticeable shift in voter opinion. Another referendum was not held until 2012, 14 years after the 1998 plebiscite. This poll saw a change in ballot formatting, as voters were asked to voice their opinion on two questions: 1) Should Puerto Rico remain an unincorporated territory of the United States, and 2) If not, what should its new status be?¹²⁴ For the first time in history, the majority of Puerto voters did not choose to remain an unincorporated territory, as 54% of voters selected "No" for the first question. As for the second part of the referendum, voters could choose between the options of statehood, free associated state, and complete independence; 61% selected the first option. 125 In 2017, another status referendum was held, this time with astounding results: 97% of voters chose statehood out of the aforementioned three options. 126 However, this special election has been heavily criticized; due to boycotts by the independence movement and the PPD, only 23% of island residents voted and the results were certainly skewed. Nevertheless, this small percentage consists of about 500,000 of the island's residents.

From the results of these two referendums, it is evident that the majority of Puerto Rican

Ayala and Bernabe, 293-302.Ayala and Bernabe, 302.

Pedro Pierluisi, interview by Robert Siegel, "All Things Considered," *National Public Radio*, November 27th, 2012. Accessed October 16th, 2019. 125 Ibid.

¹²⁶ Frances Robles, "23% of Puerto Ricans Vote in Referendum, 97% of Them for Statehood," *The New York Times*, June 11th, 2017. Accessed October 16th, 2019.

residents wish to for their island to receive full statehood. After the 2012 referendum, official statements for both the Democratic and Republican Party expressed support for any decision that Puerto Rican voters expressed. Yet despite this supposed approval, no changes to Puerto Rico's status appear to be in the foreseeable future.

Chapter 4. Disaster Politics

In order to fully understand the shortcomings of the United States government's response to Hurricane Maria, it is imperative to have some background knowledge on the departments and policies the federal government has created in order to provide relief for natural disasters. The Federal Emergency Management Agency (FEMA) was established in 1979 by President Jimmy Carter. The agency was absorbed by the Department of Homeland Security in 2003, although it still retains its own name as well as the title of "agency." According to its official government website, FEMA is responsible for the preparation and prevention of all disasters (natural or man-made) that occur on U.S.-owned soil. In addition, it is also supposed to alleviate the severity of such disasters through its relief efforts. In 1988, Public Law 100-707 established the current system under which FEMA operates today; once the president declares a state of emergency, the agency is required to responded physically as well as financially. The nation and its territories are divided into regions that each have a separate FEMA office. Puerto Rico is part of Region II, which also includes the U.S. Virgin Islands, New York, and New Jersey.

While it would be beneficial to compare FEMA's responses to previous hurricanes and other natural disasters that have previously occurred in Puerto Rico, a lack of available information makes this a challenging task. In the 40 years of FEMA's existence, only two

¹²⁸ Pierluisi.

¹²⁹ "About the Agency," *The Federal Emergency Management Agency*, n.d., accessed September 23rd, 2019, https://www.fema.gov/about-agency.

¹³⁰ Ibid.

disasters occurred before Hurricane Maria that caused significant damage: Hurricane Hugo in 1989 and Hurricane Georges in 1998. From all available accounts, it appears that FEMA provided a sufficient amount of water, shelter, and electricity to Puerto Rican residents during the aftermath of Georges. This information is not available for Hurricane Hugo. Additionally the amount of financial assistance that both FEMA and the federal government awarded to Puerto Rico in either circumstance is unavailable; as each storm caused nearly \$2 billion in damage, this information is necessary in order to fully evaluate the success of FEMA and the United States government in properly addressing these natural disasters. Furthermore, it is more relevant to compare FEMA's response to Hurricane Maria to those of Hurricanes Harvey and Irma; all three occurred within the same hurricane season, yet the latter two yielded a response from FEMA and the federal government that was drastically than their reaction to the former.

Hurricane Maria made landfall to Puerto Rico a little over a month after Hurricane
Harvey hit Texas and Hurricane Irma hit Florida and the U.S. Virgin Islands. As a result, FEMA
was tasked with responding to three natural disasters simultaneously, which is certainly not an
easy feat. However, when one compares the statistics of FEMA's responses in each location,
there is a glaring disparity between the level of financial and material relief that Puerto Rico
received versus those that were received by Florida and Texas. In order to accurately compare
FEMA's responses to these natural disasters, it is important to note that the three hurricanes in
question were not the same level of severity. While Harvey and Irma were classified as Category
4 hurricanes, Maria was considered a "high-end" Category 4 hurricane, or almost as severe as a

¹³¹"FEMA Hurricane Georges Disaster Update," *The Federal Emergency Management Agency*, September 29th, 1998, accessed December 17th, 2019, https://reliefweb.int/report/puerto-rico-united-states-america/fema-hurricane-georges-disaster-update.

Category 5 storm. 132 Additionally, Maria caused more power outages and structural damage than either Harvey or Irma. 133 The most evident statistical disproportion among the three storms was their mortality rates. Hurricane Harvey caused a total of 113 deaths, both directly and indirectly, while Hurricane Irma was responsible for 84 deaths in Florida as well as an additional 8 deaths in the Caribbean. 134 Meanwhile, 2,975 deaths have been attributed to Hurricane Maria. 135

This increased level of destruction experienced by Puerto Rico in comparison to Texas and Florida did not translate to a higher portion of FEMA's financial, material, or labor resources. In reality, Puerto Rico often received less aid in many categories when compared to Florida and Texas. This pattern can be detected from the first acts of response all the way to Congress' financial assistance authorizations. After Hurricane Maria hit, 10,000 FEMA personnel were deployed to Puerto Rico, ¹³⁶ with the total number of employees on the island rising to 19,000 at the height of relief efforts. 137 The amount of FEMA employees that responded to the hurricanes in Florida and Texas were 22,000 and 30,000, respectively, ¹³⁸ with a total 31,000 personnel in Texas at the height of relief efforts. ¹³⁹ There was also a significant imbalance between the three affected areas in terms of materials that FEMA supplied. Within the first nine days after Hurricane Maria hit, FEMA handed out 2.8 million leaders of water to Puerto Ricans. 140 While this certainly sounds like a great deal of water, it is a relatively small

¹³² Charley E. Willison, Phillip M. Singer, Melissa S. Creary, et al, "Quantifying Inequalities in U.S. Federal Response to Hurricane Disaster in Texas and Florida Compared with Puerto Rico," BMJ Global Health 4, no.1 (2019): 1-6, accessed September 23rd, 2019, https://gh.bmj.com/content/4/1/e001191. ¹³³ Willison, et al, 2.

¹³⁴ Willison, et al, 4.

¹³⁵ The George Washington University Milken Institute School of Public Health, 9.

¹³⁶ David Blumenthal and Shanoor Seervai, "What Hurricane Maria's Death Toll Reveals About Health Care in Puerto Rico," Harvard Business Review, June 7th, 2018, accessed September 23rd, 2019, https://hbr.org/2018/06/what-hurricane-marias-death-toll-reveals-about-health-care-in-puerto-rico.

Willison, et al, 2.

¹³⁸ Blumenthal and Seervai.

Willison, et al, 2.

¹⁴⁰ Blumenthal and Seervai.

amount when compared to the 4.5 million liters distributed in Texas and 7 million liters distributed in Florida within the same time frame.¹⁴¹ Despite the elevated level of housing damage that occurred on Puerto Rico, islanders only received 5,000 tarps from FEMA; Texans were bestowed 20,000 while Floridians received nearly 100,000.¹⁴²

To FEMA's credit, the organization has since claimed partial responsibility for its poor response to Hurricane Maria. In July of 2018, it published its After-Action report for the 2017 hurricane season. It is annual summary, FEMA admitted to being underprepared and mishandling the aftermath of the storm. It is used to the rapid succession of the three hurricanes, FEMA's emergency supply storage was nearly depleted when Maria made landfall. In addition to the minimal amount of tarps that were distributed in Puerto Rico, another type of equipment that was severely lacking was generators. While eventually providing Puerto Rican residents with 2000 generators over the course of the power outages, FEMA only installed 31 generators on the island the first day after the storm; Is million of the islanders lost electricity due to the storm, this amount of generators was nowhere near sufficient. The organization continued to face complications while attempting to reconnect the island to the power grid in the months following Hurricane Maria; 3 months after the storm, only 65% of power had been restored in Puerto Rico, compared to 90% in the Virgin Islands. Islands. Islands of FEMA officials, this

¹⁴¹ Ibid.

¹⁴² Ibid.

 ^{143 &}quot;2017 Hurricane Season FEMA After-Action Report," *The Federal Emergency Management Agency*, July 12th, 2018, accessed October 10th, 2018, https://www.fema.gov/media-library/assets/documents/167249.
 144 Laura Sullivan, interview by Michel Martin, "All Things Considered," *National Public Radio*, July 14th, 2018.
 2018. Accessed October 10th, 2018.

¹⁴⁶ Umair Irfan, "Puerto Rico's Blackout, the Largest in American History, Explained," *Vox*, May 8th, 2018, accessed September 25th, 2019, https://www.vox.com/2018/2/8/16986408/puerto-rico-blackout-power-hurricane.

¹⁴⁷ "2017 Hurricanes and Wildfires: Initial Observations on the Federal Response and Key Recovery Challenges," *The United States Government Accountability Office*, 34. September 2018, accessed October 11th, 2018, https://www.gao.gov/assets/700/694231.pdf.

disparity can be partially attributed to the fact that the U.S. Virgin Islands' infrastructure is more modern and better-functioning than the infrastructure in Puerto Rico. ¹⁴⁸ Additionally, the government had taken further alleviation efforts in the U.S. Virgin Islands than in Puerto Rico, which greatly aided in the electricity recovery process. 149 FEMA's relief efforts overall were hindered due to the outdated electric, transportation, and communication infrastructure on the island. In fact, a great of bridges, roads, and sewer systems in Puerto Rico are over 50 years old, and could not be repaired after the storm because many of their parts are not currently being manufactured. 150 Finally, the agency's personnel underestimated the amount of satellite phones to bring with them to the island, meaning they had practically no reliable way to communicate amongst themselves or with supply delivery coordinators. 151 These hardships were a clear oversight by FEMA as well as the federal government and easily could have been prevented if the latter had invested in updating the island's infrastructure. Another shortage that FEMA suffered were available employees. According to their own report, the organization experienced significant staffing shortages during Hurricanes Harvey, Irma, and Maria. 152 In addition, many of those who were sent to aid in relief efforts appear to have not been qualified; almost 40% of FEMA employees assigned to Puerto Rico lacked what the organization deems "disaster workforce certification."153

¹⁴⁸ Ibid.

¹⁴⁹ "2017 Hurricanes and Wildfires: Initial Observations on the Federal Response and Key Recovery Challenges," 33.

¹⁵⁰ "2017 Hurricanes and Wildfires: Initial Observations on the Federal Response and Key Recovery Challenges," 29-34.

¹⁵¹ Sullivan.

^{152 &}quot;2017 Hurricane Season FEMA After-Action Report," vii.

¹⁵³ "2017 Hurricane Season FEMA After-Action Report," 17.

While FEMA has acknowledged the aforementioned oversights, officials employed in the organization continually blame the severity of the storm; Laura Sullivan, a correspondent for NPR, stated about these claims:

FEMA has repeatedly insisted for months that the delays and the slow response was a product of the storm itself. Michael Byrne, the federal coordinating officer for Maria, told me if there's a villain here, it's the 190-mile-an-hour winds and the 50 inches of rain. And what [The FEMA After-Action Report found] is that that's not entirely true.¹⁵⁴

Indeed, FEMA's own report notes that the agency knew even before Hurricane Maria hit the island that it was going to cause widespread damage. ¹⁵⁵ In addition, the organization has completed nine preparedness exercises since 2009 for disasters specific to Puerto Rico and the U.S. Virgin Islands. ¹⁵⁶ From these assessments, FEMA had previously determined that the island would need "significant federal intervention." ¹⁵⁷ Given these facts, it is extremely puzzling why the agency was so underprepared for Hurricane Maria. The timing of Hurricanes Harvey and Irma is not an adequate excuse, as the organization clearly had information should have prevented them from redirecting their Puerto Rican supplies in the midst of hurricane season. FEMA's behavior once again demonstrates that federal agencies do not view Puerto Rico and its residents with the same amount of respect as they do with other U.S. citizens and fail to treat island-related disasters with an appropriate level of urgency as a result.

While there were clear differences between the material and labor resources Puerto Rico received from the government compared to those received by Texas and Florida, the starkest

¹⁵⁴ Sullivan.

¹⁵⁵ Ibid

¹⁵⁶ "2017 Hurricanes and Wildfires: Initial Observations on the Federal Response and Key Recovery Challenges,"24.

¹⁵⁷ Sullivan.

discrepancy between the treatment of these relief efforts is evident when examining the financial assistance each received. In Florida, survivors of Hurricane Irma were awarded a combined \$100 million within the first nine days of the storm. Texans were compensated the same amount within nine days after Hurricane Harvey made landfall. 158 However, this pattern does not continue in Puerto Rico, as survivors of Hurricane Maria were only awarded a little over \$6 million total within the first nine days after the storm. ¹⁵⁹ This trend of Puerto Rico receiving less money than their state counterparts continued when Congress created three bills intended to provide financial assistance in the wake of these natural disasters. The first bill was approved in September 2017 and allocated \$15.25 billion to Hurricane Harvey and Hurricane Irma aid. Additionally, it gave \$7.4 billion to FEMA's Disaster Relief Fund, \$7.4 billion to the Depart of Housing and Urban Development (HUD)'s Community Development Block Grant, and \$450 million to the Small Business Administration (SBA)'s Disaster Loans Program Account. 160 As this bill was approved before Hurricane Maria hit, it is perfectly reasonable that Puerto Rico did not receive any of this funding. ¹⁶¹However, the subsequent two bills were created in the months after Hurricane Maria and still failed to award Puerto Rico the financial assistance it desperately needed. In October 2017, the second bill authorized an additional \$18.67 billion for FEMA's Disaster Relief Fund; this amount was to be used for relief for all three hurricanes. This bill also awarded Puerto Rico \$4.9 billion in relief aid. 162 Not only was this amount significantly smaller than the combined total that Texas and Florida received, but it was also structured in the form of a community disaster loan, which meant that Puerto Rico would be obligated to repay the federal

¹⁵⁸ Willison, et al, 2.

¹⁵⁹ Ibid.

¹⁶⁰ Ibid.

¹⁶¹ U.S. Congress, House, Additional Supplemental Appropriations for Disaster Relief Requirements Act, HR 2266, 115th Cong, introduced in House May 17th, 2017.

¹⁶² Willison, et al, 2.

government. This was in contrast to the money awarded to Texas and Florida, which were considered grants and therefore repayment was not required. 163 However, Congress denied the loan to Puerto Rico in early January 2018, citing the island's high amount of debt. 164 Legislators seemed to change their mind again when they released another bill, created in December 2017 but not signed into effect until February 2018, directed the Puerto Rican government to create two hurricane recovery plans: one that would last the duration of a year and another that would last for two years. In order to receive the loan proposed in the last bill, the government of Puerto Rico was required to send monthly updates to Congress detailing their progress. Meanwhile, neither Texas nor Florida were required to complete such a program to receive their funding. 165 From the examples that these three bills provide, it is evident that legislators have been blatantly ignoring the severity of the damage inflicted by Hurricane Maria, particularly in comparison to the lesser destruction that Hurricanes Harvey and Irma caused. In addition, Congress failed to take into account that the population of Puerto Rico was significantly more disadvantaged than citizens affected on the mainland, both in terms of economic stability as well as level of health. 166 The next chapter will discuss how the health statistics that existed in Puerto Rico made residents particularly vulnerable during the natural disaster, as well as the medical issues that occurred after the storm as a result of the U.S. government's negligence.

Chapter 5. A Perfect Storm: Public Health Crises during Hurricane Maria

Among the most urgent issues that were created by Hurricane Maria were various concerns surrounding Puerto Rico's public health. While a myriad of these dilemmas occurred

¹⁶³ Willison, et al, 3.

¹⁶⁴ Ibid.

¹⁶⁵ Willison, et al, 3.

¹⁶⁶ Blumenthal and Seervai.

specifically after the storm, many of them had originated before Maria made landfall.¹⁶⁷ Because of this, it is necessary to have a basic understanding of the public health challenges faced by a pre-Maria Puerto Rico.

For the last several years, Puerto Rico's health statistics have been drastically different than that of the mainland United States, with Puerto Rico consistently maintaining higher percentages of medical conditions within its population. For example, the most recent data before Hurricane Maria demonstrated that 15.4% of Puerto Rican residents were living with a disability, compared to 8.6% in the United States. In addition, it has been reported that the island has the highest rate of premature births of any state or territory belonging to the U.S. Diabetes rates have also soared in Puerto Rico, as they are 50% higher than those in the United States. However, perhaps the most shocking statistic is that the death rate due to diabetes is three times higher than that in the United States. A similar trend follows in HIV death rates, with are four times as higher in the former region than the latter. These rather large disparities may be seem surprising at first glance, given Puerto Rico's territorial association with the U.S. However, it is precisely this relationship that allows for the island to operate under different health and economic policies than the mainland.

These differences can clearly be seen in the distribution and funding of healthcare. Due to its territorial status, Puerto Rico is bound to a statutory cap on Medicaid, meaning that the island has a set amount of annual federal funds that are channeled toward this program. As 49% of

¹⁶⁷ Josh Michaud and Jennifer Kates, "Public Health in Puerto Rico After Hurricane Maria," *The Henry J. Kaiser Family Foundation*, November 17, 2017, accessed November 22nd, 2018, https://www.kff.org/other/issue-brief/public-health-in-puerto-rico-after-hurricane-maria/.

¹⁶⁸ Michaud and Kates.

 ¹⁶⁹ Carlos E. Rodriguez-Diaz, "Maria in Puerto Rico: Natural Disaster in a Colonial Archipelago," *American Journal of Public Health* 108, no.1 (2018): 30-32, accessed November 22nd, 2018, https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5719712/#__sec3title.
 ¹⁷⁰ Michaud and Kates.

Puerto Rican residents relied on Medicaid before the storm, this created significant pressure on the island's government to properly distribute this federal aid. Meanwhile, none of the 50 states nor the District of Columbia have such a cap, and together only 20% of their citizens rely on Medicaid, a considerably smaller percentage than those in Puerto Rico. The latter's dependence on limited federal aid, coupled with the fact that only 35% of Puerto Rican residents receive health insurance from their employers, has led many islanders to seek alternative means for medical assistance. Community Health Centers (CHCs) are a heavily used resource in Puerto Rico, providing service to over 350,000 residents before Hurricane Maria. Much like many of their patients, all 93 CHCs on the island rely on Medicaid. ¹⁷¹ They are mostly located in rural areas, as these populations are tremendously underserved. These areas are known as "healthcare provider shortage areas", where only 32% of the need for physicians were satisfied in 2016. It is estimated that approximately 19,000 people lived in these regions before the storm. ¹⁷²

The aforementioned public health issues that Puerto Rican residents experienced were only aggravated when Hurricane Maria hit. Those with pre-existing medical conditions found it nearly impossible to seek treatment in the weeks after the storm due to damaged infrastructure, particularly in the areas of electricity, transportation, and communication. Three weeks after Maria, a mere 392 out of 5,073 miles of road were operational in Puerto Rico. Almost two months later, it was reported that 28% of residents had still not regained telecommunication access. 173 This devastation left many Puerto Ricans stranded and unable to communicate with the outside world, which could have severe implications for those with pre-existing medical conditions as well as those who were injured during the storm and could not receive necessary

¹⁷¹ Ibid. ¹⁷² Ibid.

¹⁷³ Ibid.

treatment. Furthermore, residents who were able to travel were still often unable to be seen by medical professionals due to the severe damage inflicted on hospitals and clinics throughout the island. After the storm, the majority of these medical sites suffered power outages, and many were not equipped with generators to provide emergency electricity. Three days after Hurricane Maria, only three out of the seventy hospitals in Puerto Rico were operational. ¹⁷⁴¹⁷⁵ Two months later, many hospitals had not seen much improvement, with approximately 40% of reporting facilities stating that they still had not regained normal access to power and were relying on generators. In addition to hospitals, other medical sites on the island suffered large losses of power that hindered their ability to treat patients. For instance, ten of Puerto Rico's community health clinics were not operational a month after the hurricane. As many island residents who receive Medicaid depend on these clinics for treatment, their inability to operate made it extremely difficult for some Puerto Ricans to receive care, particularly if they lived in rural areas and therefore had fewer treatment center options. ¹⁷⁶ In addition, the majority of Puerto Rico's 47 dialysis centers were without power after the hurricane, and still required the use of generators months later due to a lack of reliable access to electricity. Due to the high prevalence of diabetes on the island, this was a significant impediment to the necessary treatment of many residents and undoubtedly negatively impacted their health. 177

While the structural damage caused by Hurricane Maria exacerbated the medical issues faced by many Puerto Ricans, it also created a set of new public health concerns. After the storm,

¹⁷⁵ Samantha Artiga, Cornelia Hall, Robin Rudowitz, and Barbara Lyons, "Health Care in Puerto Rico and the U.S. Virgin Islands: A Six-Month Check Up After the Storms," The Henry J. Kaiser Family Foundation, April 24, 2018, accessed April 24th, 2018, https://www.kff.org/medicaid/issue-brief/health-care-in-puerto-rico-andthe-u-s-virgin-islands-a-six-month-check-up-after-the-storms-report/.

Michaud and Kates.

177 Ibid.

many islanders were unable to obtain fresh food on their own and were forced to depend on donations from FEMA, the Red Cross, and other groups. These provisions were still occurring in overwhelming numbers two months after Maria made landfall, with approximately one million meals being given out per day. While it was certainly generous of these groups to donate this food, the inability to access fresh food could potentially lead to malnutrition in many Puerto Rican residents. ¹⁷⁸ As previously stated in chapter 1, many Puerto Ricans also had extreme difficulties obtaining safe drinking water. ¹⁷⁹ This accessibility issue was due to the fact that many water treatment stations were not functioning weeks after the storm hit. By mid-November, 91% of Puerto Rican residents had regained water access; while this is a vast improvement, it still left approximately 300,000 Puerto Ricans with reliable access to potable water. 180 Sheer desperation led many residents to drink from natural sources such as ponds and streams, ¹⁸¹ and it and in the weeks after Hurricane Maria, rates for waterborne, communicable diseases began to spike. In addition to the hundreds of cases of leptospirosis that were discussed in chapter 1, reports of scabies, conjunctivitis, vomiting, diarrhea, and asthma increased on the island in the months after the storm. There is a potential for these statistics to be even higher than currently estimated, as proper assessment of cases was challenging due to damage of public health labs on the island. 182 Furthermore, scientists studying the groundwater on the island found that one well in municipality of Dorado was sourcing water from an EPA Superfund site, which was filled with various industrial chemicals. Due to the already high levels of premature births in

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¹⁷⁸ Ibid

¹⁷⁹ Sarah Schmidt, "Puerto Rico After Maria: 'Water is Everything,'" The Washington Post, September 12th, 2018, accessed September 29th, 2018,

 $https://www.washingtonpost.com/news/national/wp/2018/09/12/feature/water-is-everything-but-for-many-in-puerto-rico-it-is-still-scarce/?noredirect=on\&utm_term=.ea3741993c94.$

¹⁸⁰ Michaud and Kates.

¹⁸¹ Schmidt.

¹⁸² Ibid.

Puerto Rico, researchers are concerned about the effect these chemicals might have on expectant mothers and are currently investigating this relationship. Interestingly enough, some of these scientists are completely funding these research projects themselves, as the National Institute of Health denied their grant applications. ¹⁸³

In addition to the myriad of physical ailments Puerto Ricans suffered after Hurricane Maria, the storm and its aftermath also triggered a plethora of mental health issues for many island residents. Puerto Rican professionals have reported that the rate of mental health services being sought on the island has greatly increased since the storm occurred. Depression and anxiety are the most common issues listed by potential patients, including those who have not reported experiencing these issues previously. ¹⁸⁴ Several mental health experts have asserted that the storm exacerbated an already fragile mental health climate on the island. Years of economic recession have been mentally taxing for many island residents, ¹⁸⁵ and the trauma from the storm and the stress of recovering in its aftermath has pushed many residents "over the brink", according to psychologist Frances Boulon. ¹⁸⁶ While the Puerto Rico Psychology Association was in the midst of developing an emergency mental health network for this type of crisis, it was not functional when Hurricane Maria hit. ¹⁸⁷ This left health professionals unequipped to deal with the needs of mental health patients in the aftermath of the storm, as many of their typical resources were no longer available. Many of the island's pharmacies were not operational during

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¹⁸³ Deirdre Lockwood, "Looking for Lingering Health Effects of Hurricane Maria," *Chemistry and Engineering News* 96, no. 37 (2018): n.p., accessed November 22nd, 2018, https://cen.acs.org/environment/pollution/Looking-lingering-health-effects-Hurricane/96/i37.

Michaud and Kates.

¹⁸⁵ Jim Wyss, "Puerto Rico's Suicide Rates Spike After Maria. And the Mental Health Crisis Isn't Over," *The Miami Herald*, n.d., accessed September 10th, 2019, https://www.miamiherald.com/news/nation-world/national/article217545615.html.

¹⁸⁶ Jeremy Lybarger, "Mental Health in Puerto Rico," *Monitor on Psychology* 49, no. 5 (2018): 20, accessed September 10th, 2019, https://www.apa.org/monitor/2018/05/puerto-rico.
¹⁸⁷ Ibid.

and after the storm, which made it impossible for people with existing mental health conditions to access any antidepressants or antipsychotics they might have needed. In addition, many of these patients were unable to seek professional help or attend their regular treatments due to infrastructure damage as well as the lack of cell phone service on the island. These lack of available treatment options had stark consequences for many islanders; shortly after the storm, Puerto Rico's suicide hotline recorded as many as 800 phone calls per day, ¹⁸⁸ and instances of suicide have increased by 29% compared to those from before Hurricane Maria. ¹⁸⁹ Perhaps the most frightening statistic is that island psychologists have recorded instances of suicidal thoughts in children, many of whom said they were worried about their families' future in the aftermath of the storm. ¹⁹⁰

In addition to suicide rates, Puerto Ricans have faced a notable elevation in rates of Post-Traumatic Stress Disorder (PTSD) since Hurricane Maria occurred. In early 2019, epidemiologists from the University of Miami published a study that recorded symptoms of PTSD in Puerto Rican adults who had been forced to relocate to Florida due to the storm, as well as those who had remained on the island. According to their findings, 65.7% of the surveyed Florida population had PTSD, compared to 43.6% of the surveyed population in Puerto Rico. While these percentages are both concerning, the disparity between the two demonstrates the additional trauma that is experienced when an individual is displaced during a natural disaster. High PTSD rates were recorded for Puerto Rican children as well as adults after the storm. One

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¹⁸⁸ Wyss.

¹⁸⁹ Lybarger.

¹⁹⁰ Wyss.

¹⁹¹ Carolina Scaramutti, Christopher P. Salas-Wright, Saskia R. Vos, et al, "The Mental Health Impact of Hurricane Maria on Puerto Ricans in Puerto Rico and Florida," *Disaster Medicine and Public Health Preparedness* 13, no. 1(2019): 24-27, accessed September 10th, 2019, https://www.ncbi.nlm.nih.gov/pubmed/30696508.

study recorded 7.2% of surveyed children as exhibiting signs of PTSD; while this may seem like a low statistic, the study evaluated 96,108 schoolchildren in 3rd-12th grade, meaning that just under 7,000 of these children are experiencing symptoms of PTSD.¹⁹²

Another mental health issue that has been aggravated due to Hurricane Maria is substance abuse. After the storm hit, many pharmacists on the island became more lenient when filling prescriptions, often not requiring a doctor's signature. While this practice is obviously unethical and illegal, many saw it as a form of charity, as residents who were injured as a result of the hurricane were often unable to be seen by doctors and therefore get authorization for the medication they needed. 193 However, this act of goodwill backfired immensely, as many of these prescriptions found their way to the black market. Puerto Rican health professionals are now hypothesizing that this chain of events, combined with the increased reports of mental health issues, are the main causes of a significant spike in fentanyl use on the island. 194 A notable increase in overdoses since Hurricane Maria has been reported, but it has been challenging for coroners to definitively prove that these deaths were caused by fentanyl in particular due to departmental budget cuts that have limited testing. While there have been 40 confirmed fentanyl deaths as of March 2018, experts suspect that an additional 75 are linked to the drug. 195 Although the drug was present on the island before the storm, many experts believe that the increase of homelessness that was caused by Maria has also played a role in the surging popularity of fentanyl. 196 Despite the fact that it is evident that Maria aggravated mental health and substance

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Rosaura Orengo-Aguayo, Regan W. Stewart, Michael A. de Arellano, et. al., "Disaster Exposure and Mental Health Among Puerto Rican Youths After Hurricane Maria," *JAMA Network Open 2*, no. 4 (2019), accessed September 10th, 2019, https://jamanetwork.com/journals/jamanetworkopen/fullarticle/2731679.
 Danica Coto, "Growing Opioid Crisis Adds to Puerto Rico's Problems," The Associated Press, January 7th, 2019, accessed September 10th, 2019, https://apnews.com/2636642b00e14f8b84f7e6e71a9ee1f7.

¹⁹⁴ Ibid.

¹⁹⁵ Ibid.

¹⁹⁶ Wyss.

abuse issues in Puerto Rico, more research about the extent of its impact is needed. Fortunately, the National Institute of Health awarded a team of researchers from Drexel's Dornslife School of Public Health \$3.2 million to investigate the link between Maria and these mental health issues in May of 2019. 197

Each of the aforementioned public health issues faced by Puerto Rican citizens in the wake of Hurricane Maria were either completely avoidable or could have been minimized had proper intervention by the United States government occurred. While there are several clear examples of governmental failures in this context, the most egregious and infamous of these was undoubtedly the inaccurate reporting of Hurricane Maria's mortality rate. Initial reports after the hurricane stated that the death toll was as low as 16 people in Puerto Rico. 198 Two weeks after the storm hit, President Trump visited the island and maintained this figure during a press conference. 199 As the weeks progressed and more autopsies were conducted. The Puerto Rican government continued to update this data until it arrived at its definitive, official statistic in December 2017: 64 individuals died as a result of the storm. ²⁰⁰ This number seemed incredibly low to many of the residents of Puerto Rico, who had obviously witnessed an immense amount of damage, injuries, and even fatalities at the hands of the storm. In addition, dozens of media outlets who had been covering the natural disaster also questioned both the Puerto Rico and U.S. governments' motivations in releasing such a low death toll. 201 While both the United States and

^{197 &}quot;Studying Psychiatric and Substance Use Disorders in Puerto Rico Before and After Hurricane Maria," Drexel Dornslife School of Public Health, May 2nd 2019, accessed September 10th, 2019, https://drexel.edu/dornsife/news/latest-news/2019/May/Studying-Psychiatric-and-Substance-Use-Disorders-in-PR-Before-and%20After-Hurricane-Maria/.

¹⁹⁸ "Puerto Rico: Trump Compares Maria and Katrina Deaths," *The British Broadcasting Corporation*, October 4th, 2017, accessed September 11th, 2019, https://www.bbc.com/news/world-us-canada-41487814.

²⁰⁰ Ray Sanchez, "How Puerto Rico's Death Toll Climbed from 64 to 2,975 in Hurricane Maria," Cable News Network, August 29th, 2018, accessed September 11th, 2019, https://www.cnn.com/2018/08/29/us/puerto-ricogrowing-death-toll/index.html. ²⁰¹ Ibid.

its territory maintained that 64 was the official mortality rate, several publications began to release their own estimates of the death toll, ²⁰² which were typically around 1,000. ²⁰³ In February 2018, the government of Puerto Rico responded to this mounting criticism by authorizing an independent study by George Washington University's Milken Institute School of Public Health and the University of Puerto Rico to determine an accurate death toll for Hurricane Maria.²⁰⁴ Before these researchers had completed their investigation, the New England Journal of Medicine released a study from Harvard University that estimated that the actual death toll was between 800 to over 8,000. Researchers attributed this rather large range to the fact that their data came from household surveys. ²⁰⁵ In August 2018, the researchers from George Washington University published their findings. In order to obtain the accurate death toll from the storm, researchers counted deaths on the island from September 2017 to February 2018 and subtracted this figure from the average mortality during this time. ²⁰⁶ Using this formula, researchers determined that 2,975 excess deaths had occurred in Puerto Rico due to the hurricane. In addition to calculating the death toll, this report also evaluated the death certification process that had been employed in the midst of the disaster recovery. According to the George Washington researchers, most of the physicians employed at the time did not receive proper training on the creation of death certificates, specifically in disaster situations. Furthermore, power outages due to the storm caused an average delay of 17 days for death registration. ²⁰⁷ Researchers also

²⁰² Adrian Florido, "Hurricane Maria Caused 2,975 Deaths in Puerto Rico, Independent Study Estimates," National Public Radio, August 28th, 2018, accessed September 11th, 2019, https://www.npr.org/2018/08/28/642615337/hurricane-maria-caused-2-975-deaths-in-puerto-rico-independentstudy-estimates. ²⁰³ Sanchez.

²⁰⁴ Ibid.

²⁰⁵ Kishore, Nishant, et al, "Mortality in Puerto Rico after Hurricane Maria," New England Journal of Medicine 379, no. 2 (2018): 162–170, accessed September 10, 2018, https://www.nejm.org/doi/full/10.1056/NEJMsa1803972.

²⁰⁶The George Washington University Milken Institute of Public Health, i.

The George Washington University Milken Institute of Public Health, iii.

attribute the issue to lack of communication between coroners and the Puerto Rican government.

Summarizing its assessment of the causes of death toll inaccuracy, the study states:

There were gaps in the information provided by the Government of Puerto Rico, including limited explanation of the death certification process, distinguishing between direct and indirect deaths, or explanations of barriers to timely mortality reporting.

Despite the potential for information gaps to increase the risk of the propagation of misinformation and rumors, the Government of Puerto Rico did not systematically monitor and address misinformation or rumors in news outlets and on social media platforms.

It is evident from the above statement that the Government of Puerto Rico clearly has procedural issues that need to be addressed immediately. However, errors on the part of the island territory do not acquit the United States government of their lack of adequate relief efforts. Instead, these shortcomings on the part of Puerto Rico are yet another example of the perils of the ambiguous status under which Puerto Rico currently falls; had they been obligated to comply with U.S. regulations, perhaps these errors would not have occurred. Furthermore, President Trump's acceptance and perpetuation of these numbers demonstrate a remarkable amount of indifference on the part of the United States government. Despite immense and continual criticism from parties in Puerto Rico as well as on the mainland, White House officials only relented on the death count when the results from the George Washington study emerged. It is clear from this that the U.S. government only cared about their own optics, and showed little sympathy toward Puerto Ricans who suffered injury, sickness, or the loss of a loved one due to the storm.

 $^{^{208}}$ The George Washington University Milken Institute of Public Health, iv.

Chapter 6: Preventing the Next Maria

Based on the evidence offered in the preceding chapters, it is clear that Puerto Rico has suffered from inequitable treatment by the United States government, which resulted in various occurrences of injustice. As demonstrated by the complex history of the relationship between the two regions outlined in chapter 3, the United States' neglect of its territory is rooted in racism and sentiments of superiority. While current prejudices upheld by government employees may not be intentional, they remain intact nonetheless. Because of these attitudes, my recommendations to ameliorate the situation can be divided into three categories: utilization of grassroots movements in Puerto Rico, modification of Puerto Rico's territorial status and revision of FEMA's response plan for the island and federal government relief spending. Making these changes will hopefully prevent a similar situation of environmental racism from occurring in Puerto Rico in the future.

In chapter 2 of this thesis, I noted that the current official definition of environmental racism was limited to communities experiencing toxic pollution at disproportionate rates. Due to the impending climate crisis, it is imperative that this definition be expanded to include communities who experience inadequate government response to natural disasters. Broadening this definition both officially and colloquially will give activists the grounds necessary to pursue the proper avenues for environmental justice. Fortunately, there are currently several grassroots movements working to improve conditions in areas affected by Hurricane Maria. The most prominent of these organizations is the Climate Justice Alliance, which is based on the mainland but partnering with several smaller Puerto Rican organizations, such as Organización Boricuá de Agricultura Ecológica de Puerto Rico. ²⁰⁹ Together, these groups have launched a movement

²⁰⁹ "Our Power Puerto Rico: Moving Toward a Just Recovery," *Climate Justice Alliance*, accessed December 17th, 2019, https://climatejusticealliance.org/our-power-puerto-rico-report/.

called Our Power Puerto Rico Campaign that focuses on providing disaster relief in marginalized communities. ²¹⁰ As the Climate Justice Alliance's main focus is on assisting communities that the federal government often neglects, the nation of Puerto Rico can certainly benefit from their work. However, it would be advantageous if Puerto Rico had a strong network of environmental justice organizations that were based on island and comprised of island residents. Fortunately, this is likely to occur in the near future; much of Puerto Rico's school-aged population, known as "Generation Maria," have been incentivized by their experiences in the storm's aftermath to join the fight against climate change. ²¹¹ Hopefully, this generation will not only further the work of U.S. grassroots movements on the island, but adopt them as their own and utilize their unique perspectives as Puerto Rican residents to ensure that such negligence and injustice in the wake of an environmental disaster never occurs on their island again.

As previously discussed in chapter 3, the governmental status of Puerto Rico has been unnecessarily complex since its acquisition by the U.S. and is still convoluted today. Terms such as commonwealth, unincorporated territory, and freely associated state are all part of the current vernacular to describe Puerto Rico's status, only adding to the confusion of the general public. In addition, the failure of U.S. Congress to determine and disclose which constitutional rights do not apply to Puerto Rico has not only complicated legal cases, but also negatively impacts the lives of people who are supposed to be under the United States' protection. ²¹² The results from the most recent status referendums on the island have clearly indicated that the majority of Puerto Ricans wish that the territory would be fully incorporated as a state. Due to this strong

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²¹⁰ Ibid

²¹¹ Brown, Alleen, "Two Years After the Hurricane, Puerto Rico's 'Generation Maria' Leads a Climate Strike," *The Intercept*, September 20th, 2019, accessed December 7th, 2019, https://theintercept.com/2019/09/20/climate-strike-puerto-rico-hurricane-maria/.

Willie Santana, "Incorporating the Lonely Star: How Puerto Rico Became Incorporated and Earned a Place in the Sisterhood of States," *Tennessee Journal of Law and Policy* (9), no. 4 (2014): np.

show of support, as well as the economic and political benefits that the island would gain as a state, I wholeheartedly endorse the statehood of Puerto Rico.

If the island were to be incorporated into the Union, the application of U.S. laws and policy on the island would no longer require extended periods of debate in Congress, as it would be fully covered by U.S. Constitution. Perhaps equally as important as giving Puerto Rican residents constitutional rights, I am hopeful that statehood would legitimize these citizens as true Americans in the eyes of many continental residents of the United States, particularly government employees. If this were the case, government organizations such as FEMA would make the island as much of a priority as any other state. While this may seem optimistic, I am not suggesting that a shift in perception of Puerto Rico alone would prevent another catastrophic response to a natural disaster from happening again; rather, incorporating Puerto Rico as a state would remove any ambiguity toward the amount of aid FEMA is obligated to provide in emergency situations.

Unfortunately, the road to statehood is no easy journey, and has been increasingly complicated by Congress' continued postponement of a change in Puerto Rico's status. Furthermore, this process has been hindered by the fact that there is currently no committee within Congress that is devoted to acting on the 2012 or 2017 referendums. I propose that such a committee should be created immediately. This group should be headed by the resident commissioner of Puerto Rico, the island's non-voting representation in the U.S. House of Representatives; Congresswoman Jennifer González-Colón currently holds the position. The main role of this group would be to design and disseminate a final state referendum in a timely

²¹³ Mariano Castillo, "Puerto Ricans Favor Statehood for First Time," *Cable News Network*, November 8th, 2012, accessed December 9th, 2018, https://www.cnn.com/2012/11/07/politics/election-puertorico/index.html.

matter. Should the results from this referendum demonstrate that the majority is in favor of statehood, this committee would then be responsible for bringing this issue to the House floor. Finally, should the bill for statehood pass and be signed into law, the committee would oversee the transitional process from territory to state. During this phase, the committee should work in close consultation with the United Nations Special Committee on Decolonization²¹⁴ as well as the Puerto Rico Economic and Prosperity Caucus to ensure that measures created to transition the island into statehood are both economically feasible as well as successful in deconstructing colonial systems.

As examined in chapter 4, it is evident that FEMA's plans for disaster relief in Puerto Rico desperately need to be redesigned. The concurrent disasters of Harvey, Irma and Maria demonstrated that FEMA does not have a system in place that accurately measures the amount of physical, material, and financial relief needed based on the severity of the storm. This structure should be implemented into FEMA's procedures immediately in order to prevent another case of environmental racism from occurring in the future. Additionally, the aftermath of Hurricane Maria made it obvious that many FEMA employees were not properly qualified for their positions. As such, the organization's hiring process should become much more stringent, and a candidate's fluency in Spanish should become a higher priority for consideration of employment in Puerto Rico. Finally, it is imperative that FEMA offices on the mainland remain in better communication with those in Puerto Rico and ensure that all employees receive the same basic training across the board, as well as specialized regional training when necessary. It is only when all members of the organization are held to the same standard that it will be truly prepared for the next disaster.

²¹⁴ "Committee of 24 (Special Committee on Decolonization)," *The United Nations*, accessed December 9th, 2018, https://www.un.org/en/decolonization/specialcommittee.shtml.

Still, FEMA is not the only government agency that mishandled the aftermath of Hurricane Maria. U.S. Congress was incredibly ironfisted when offering aid to Puerto Rico, particularly when compared with the packages received by Texas and Florida. While legislators blamed this on Puerto Rico's exorbitant debt, this is not a sufficient excuse given the United States' role in creating and perpetuating this debt throughout the past century. Despite the confusing and complex nature of the relationship, it is evident that the United States has a responsibility to protect the people of Puerto Rico in at least the most basic sense and this should be adequately expressed in the amount of disaster aid received by the island. With this in mind, I propose that a mechanism, similar to the one I suggested above for FEMA, be implemented in which the amount of aid received by a U.S. territory or state is directly correlated to the severity of the disaster that occurred. This is the only manner in which fairness can be ensured and that all U.S. citizens are guaranteed the disaster relief they deserve as members of this nation.

Chapters 4 and 5 explored the impact of the island's poor infrastructure on FEMA's response to the disaster as well as residents' access to health services. The evidence provided clearly demonstrates that Puerto Rican infrastructure must be improved in order to prevent a similar situation in the future. Due to United States' responsibility to meet the basic needs of Puerto Rican residents, I propose that the federal government contribute to the majority of this project. Updating this antiquated infrastructure would immensely improve residents' access to health services in general as well as in times of crisis, and would therefore be a necessary investment in the health of Puerto Ricans.

Chapter 5 demonstrated the significant disparity between the health of Puerto Rican residents and that of citizens on the mainland. It is evident that many of the health issues that were exacerbated by Hurricane Maria could have been minimized or avoided completely if

Puerto Rico received the same funding for healthcare as the 50 states. In order to prevent similar catastrophes from occurring in the future, it is vital that Puerto Rico's Medicaid cap is abolished. Instead, funding should be determined by the percentage of the population who depend on Medicaid coverage. This would ensure that the healthcare needs of nearly half the island's population are adequately met. Additionally, the U.S. federal government should increase its funding to the Puerto Rican Department of Health in order to lessen the disparity between the mainland and Puerto Rico of certain disease rates, particularly diabetes, HIV, and premature births.

Each of the proceeding chapters has proven that The United States' contentious relationship with Puerto Rico has created significant obstacles for Puerto Rican residents to achieve an economic and political stability on par with that of the mainland. This imbalance culminated in the aftermath of Hurricane Maria, as the evidenced by the unequal distribution of financial and material resources between Puerto Rico and the states affected by less severe hurricanes. The events of Hurricane Maria demonstrate that the ambiguous status of Puerto Rico is harming the island's residents rather than granting them autonomy and therefore must be abolished. It is imperative that Puerto Rico is incorporated into the Union in order to guarantee its residents the rights of United States citizenship that they were promised exactly one century before Maria touched down on the island's shores.

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