



**WPI**

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# MEDUSA:

## A VIDEO GAME DESIGNED TO AFFECT EMPATHY AND RAPE MYTH ACCEPTANCE LEVELS

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## Abstract

This paper discusses the research and design process of the creation of *Medusa*. *Medusa* is a 2-dimensional, pixelated, role playing game with a top down view, that was created with the purpose of raising awareness and active consideration of rape culture. Within this game players are able to take the role of both Perseus and Medusa in an interactive retelling of Medusa's story. Players start the game as Perseus and their main goal is to defeat the evil monster Medusa. Once the player is about to kill Medusa, a flashback occurs which transfers the player into the body of Medusa. This flashback allows players to learn about Medusa's life before she was cursed, and her sexual assault revealing why she was cursed in the first place. The game then ends with Medusa entering the cave where Perseus later killed her. We combined a specific balance of disciplines and focuses from psychology, philosophy, and game design to have our game successfully raise awareness about rape culture while being sensitive and ethical in both respect to the players and their potential triggers and the sensitivity of the topic and its representation. In this paper, we will delve into the extensive research done on various topics such as rape culture, bias reduction, and educational game design that aided us in our design process.

Beyond creating *Medusa* to spread awareness, we also wanted to assess the ability of video games to increase players' empathy towards victims of sexual assault as well as decrease rape myth acceptance and hostile sexism levels. Thus we conducted a study of the game in which participants were randomly assigned to play one of two versions of the game: 1) playing as Perseus only, or 2) playing as Perseus and Medusa. After playing the game, participants answered questions that measured empathy felt towards Perseus and Medusa, hostile sexism levels, and rape myth acceptance levels. We initially hypothesized that playing Medusa would lead to increased empathy towards Medusa and reductions in rape myth acceptance and hostile



sexism. Our data did not support our second nor third hypotheses as there were no significant differences between rape myth acceptance and hostile sexism levels and the game version played. However, the data gathered did support our first hypothesis that playing the full game would produce higher levels of empathy for Medusa. Additional studies can expand on the potential video games offer in promoting player empathy for game characters and how that empathy may affect cognitive biases.

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## Table of Contents

Abstract	2
Acknowledgements	4
Table of Contents	5
List of Figures	7
Medusa: A Video Game Designed to Affect Empathy and Rape Myth Acceptance Levels	9
Rape Culture, Female Representation, and Trauma	12
Rape Culture	13
Toxic Masculinity and Misogyny	14
Women as Portrayed in Classic Myths	14
Women Portrayed in Gaming	16
The Monstrous Feminine in Video Games	18
Trauma	19
Trauma Representation in Games	20
Cognitive Biases, Perspective-Taking, Empathy, and How Games Integrate Them	22
Cognitive Biases	22
Perspective-Taking and Empathy	23
Perspective-Taking	23
Empathy	25
Desensitization	27
Reducing Bias Through Gaming	28
Role-Playing Games	29
Educational Games	30
The Overall	31
Medusa: The Design and Creation	33
The Creation Process	41
Study of the Effects Playing Medusa had on Empathy, Rape Myth Acceptance Levels and Hostile Sexism	59
Method	59
Participants	59
Materials	60
Measures	61
Procedures	66
<b>Results and Discussion</b>	<b>68</b>

	6
Empathy Levels for Medusa	68
Rape Myth Acceptance Levels	69
Hostile Sexism Levels.	70
<b>General Discussion</b>	<b>71</b>
Final Game Build	72
Limitations	74
General	74
Psychology	75
Philosophy	75
Game Design	76
<b>Conclusion</b>	<b>76</b>
Summary of Our Project	76
What Went Wrong	77
What Went Right	78
Future work	79
References	<b>82</b>
Appendix A	<b>90</b>
Appendix B	<b>94</b>
Appendix C	<b>99</b>
Appendix D	<b>118</b>

## List of Figures

Figure 1. Monstrous Feminine in Video Games.....	19
Figure 2. Perseus Gameplay Introduction.....	33
Figure 3. Perseus Killing Animals.....	34
Figure 4. Perseus Preparing to Slay Medusa.....	34
Figure 5. Medusa During the Festival.....	36
Figure 6. The Temple Cutscene.....	37
Figure 7. Medusa Contemplation Cutscene.....	38
Figure 8. Medusa Crying in Cave .....	39
Figure 9. Ending Video.....	40
Figure 10. Artwork in <i>Medusa</i> .....	41
Figure 11. Environmental Design Update.....	52
Figure 12. Updates Textbox Now Showing the Speaking Character.....	54
Figure 13. Pseudocode for Spawning Player Avatar.....	55
Figure 14. Pseudocode for Stone Cone.....	56
Figure 15. Dialogue Box Example.....	56
Figure 16. NavMesh Layout.....	57
Figure 17. Major Components of Shortened Version.....	60
Figure 18. Major Components of the Full Game <i>Medusa</i> .....	61
Figure 19. Difference Between Game Version and Empathy.....	70
Figure 20. Histogram of Rape Myth Acceptance Levels.....	71
Figure 21. Histogram of Hostile Sexism Levels.....	72



## **Medusa: A Video Game Designed to Affect Empathy and Rape Myth Acceptance Levels**

The story of Medusa is commonly known. There have been dozens of retellings and variations on the classic Greek myth in different forms including television, movies, art, literature, music, and video games. Despite theatrical liberties taken, all forms of the story share a common structure. Medusa starts as a beautiful priestess to Athena. There is some form of sexual contact between her and Poseidon within Athena's temple. Athena, enraged by this, curses Medusa so that none may gaze upon her without being turned to stone. These depictions vary in the light they portray Medusa in. Her depictions range from being a lovestruck woman making a bad decision to a conniving temptress committing sacrilege. However, one of these depictions stands out more than the others for the humanity it gives to the so-called "monster": Ovid's *Metamorphoses*. In this re-telling, Medusa is still a priestess of Athena, renowned for her beauty. However, a new light is shed upon the story. In this version, Medusa is raped by Poseidon and subsequently cursed by Athena, while Poseidon faces no consequences for his heinous act. This depiction is unique among the many tellings of Medusa. Where most other depictions of Medusa portray her as wanting the sexual activity with Poseidon, *Metamorphoses* instead shows Medusa in a different light: a victim of sexual assault at the hands of a powerful figure. Her story is her own in only a handful of instances, where in the rest her history is reduced and downplayed. Her ordeal is minimized in the greater tale of the hero Perseus, her death merely a stepping stone in his journey. This disregard for Medusa's tale persists throughout history, settling itself into modern day gaming culture, where Medusa is usually depicted as just another monster to slay with no regard for her history and background. Our team saw an opportunity to not only tell the infamous tale in a new light, but to use it to challenge the commonly accepted misogynistic depictions of Medusa, and to give symbolic insight into the trauma and struggles of a rape

victim.

Through the creation of a video game, we hope to shine light upon the common discriminations cast towards women and sexual assault survivors. In the patriarchal society that we live in, bias against women is something that is not uncommon. In fact, worldwide more than 80 percent of men and women alike hold gender biases favoring men above women (Conceição et al., 2020). Women have been seen as less capable than men in various aspects of life, including but not limited to: in the workplace, in sports, and in the sphere of education. Along with this bias is the inequality between the perception and treatment of men and women, with men being the more favorable. This discrimination is both explicit and implicit. The explicit discrimination due to rape myth acceptance is our main focus. Rape myth acceptance is when an individual accepts false, prejudicial, and/or stereotyped beliefs about rape. These beliefs play a large part in the various reasons that women are seldom heard or encouraged to speak up about sexual assault. In these circumstances, there are assumptions that are automatically made when a woman builds up the courage to speak. These assumptions try to lay blame onto the victim, blaming her assault on what she wears or how she acts, or her very womanhood, as if being a woman is enough to be subjected to such violence. Additionally, women may then be examined for their sexual history as if that has anything at all to do with their susceptibility to be raped (Brownmiller, 1993). Because of this, sexual violence tends to be pushed under the rug or made out to be less severe than it really is (Herman, 2015).

Fortunately, advances in technology have created an opportunity for movements and platforms with the intention of allowing the voices of victims to be heard. The #MeToo Movement was created in 2006 to encourage and enable women to speak up about their experiences of sexual assault. Tarana Burke, the founder of the movement, once turned away a



young girl with a story of sexual assault because Burke was unable to muster the courage to admit how much she understood the girl's pain (Burke, 2020). The experience haunted her and she has since founded the #MeToo Movement for voiceless women to find the courage to tell their stories and receive validation and understanding from people who acknowledge their sexual assault. The movement has since enabled many women to bravely share their experiences and reveal to the world the problem of sexual violence, specifically sexual violence perpetrated by men against women.

However, even when opportunities are presented, it is not always easy or safe for an individual to share their survival story. Sharing one's experience with sexual assault has the potential to reopen emotional wounds and forces an individual to recall and relive the trauma that accompanies such an experience. Unfortunately, when women's stories of sexual assault are brought to light, they are sometimes rejected, branded as falsehoods, and ultimately ignored. Their stories can be twisted and manipulated to be used as weapons against the women to portray them as liars instead of victims, accusing them of using a victimhood narrative to elevate themselves at the expense of someone's career and livelihood.

Although this contamination of survivor's experiences exists, allegations aren't always seen this way. When people hear a woman accusing someone of sexual assault, they may assume that the accusations will be brought up to the proper authorities, dealt with in a swift and timely manner, and the assaulter will be brought to justice. This is far from the typical case. It can often take the victim weeks, months, or even years just to get the chance opportunity for closure or justice. But even when they get to this point, the closure they seek may not come. Their assaulter may get a reduced sentence due to unrelated reasons such as a swimming lap time, they may

walk away without any punishment, or even be elevated to serve as a judge in the highest court in the country.

Our project is focused upon learning whether a video game has the potential to increase empathy towards a sexual assault survivor and lower explicit attitudes regarding sexual assault. By putting the player in the shoes of an assault victim, witnessing what victims experience, and then amplifying it through the eyes of Medusa - one of the most well-known but misunderstood Greek mythological figures - we hope to increase empathy and raise awareness as well as educate players about the experiences of women who are victimized. For the duration of our project, we focused on methods that could be implemented to design a game that spreads awareness about the harmful effects of sexual violence and the detrimental nature of upholding the male-centric values of a patriarchal society in a way that may affect an individual's explicit bias against women. In order to research this, the team created a video game with the purpose of being utilized within a study. The study was designed to measure the amount of empathy the player felt towards the two main characters of the video game as well as levels of rape myth acceptance and hostile sexism. In this paper, we will discuss the design choices, procedure, playtesting, and results of all stages of the project. We will also go over the captured results and discussion of the potential impact, future revisions, and recommendations concerning the project and how it fulfilled the goal of increasing awareness and affecting biases surrounding sexual violence and male-centric ideologies within a patriarchal society.

### **Rape Culture, Female Representation, and Trauma**

In this section we will explain what rape culture is, different factors that contribute to rape culture, and representation of women in different mediums that contribute to this patriarchal

view of women. We will also go over the damaging effects that rape culture has on victims of sexual violence as well as how we could reflect these experiences in our game.

### **Rape Culture**

Rape culture can be defined as an aspect of society in which sexual aggression such as cat-calling and rape is normalized (Zaleski et al., 2016, p. 923). The term “rape culture” was first used in the 1970s by second-wave feminists to raise awareness about rape and its origins in misogyny and sexism. Aspects of rape culture can be categorized into slut shaming, victim blaming, and rape myths.

Harding (2015, pp. 24-5) details seven basic rape myths as: “She asked for it”, “It wasn’t *really* rape”, “He didn’t mean to”, “She wanted it”, “She lied”, “Rape is a trivial event”, and “Rape is a deviant event”. Another related myth is miscommunication between the rapist and the victim, particularly between a man and woman, where the man misunderstands the woman because the woman was unclear about her refusal of the man’s advances. All of these myths serve to either trivialize rape as a minor or unusual occurrence or exonerate the rapist and blame the victim.

Supported by the distorting effects of rape myths, hindsight is one of the many causes of victim blaming. Knowing the events that led to a sexual assault and knowing its outcome creates a cognitive bias called the hindsight bias. In the event of sexual assault, hindsight creates causal links between the victim’s prior behavior and the known outcome. The actions of the victim prior to an assault seem to lead to an inevitable result, the alternative actions to avoid assault are more obvious in hindsight, and so blame is placed upon the victim for not foreseeing the “predictable” outcome and taking appropriate actions to avoid it.

This blame and negative view of survivors extends beyond sexual assault in the modern day. Negative and misogynistic representations of women have been found throughout history and in many different forms, from ancient stories to modern day media.

### **Toxic Masculinity and Misogyny**

Toxic masculinity, formerly known as traditional masculinity, is a strict commitment to following traditional gender roles (i.e., set concepts, actions and societal expectations placed upon individuals by their biological gender) that, in the end, is harmful to both males and other gender-based identities (Pappas, 2019 as cited in de Boise, 2019). It is defined by males being the dominant gender, and traps people into believing that men can only be assertive and aggressive. Toxic masculinity can cause transphobia, homophobia, and lead to harmful behavior that can threaten the safety of others and those that conform to it (de Boise, 2019). These gender roles also contribute to the issue of misogyny, which is the hateful prejudice against women. Misogyny and gender roles can be seen in several aspects of our society, such as women being paid less than men for work of the same value. The gender roles that toxic masculinity adheres to as well as the ingrained misogyny throughout our culture have formed the basis of our patriarchally structured society. In accordance with the gender roles in this misogynistic culture, women are marked as emotional, submissive, and passive sexual objects which belong to the men in the society; removing a woman's independence, individuality, and ability to provide consent or control her own body.

### **Women as Portrayed in Classic Myths**

Under a patriarchal structure, religion and myth are designed by men, thus women and the images of women in those religions and myths are defined by male perspective (Millett, 1978 p. 46). Millett describes myth as, "a felicitous advance in the level of propaganda, since it so

often bases its arguments on ethics or theories of origins” (1978, p. 51). When myths are created by men, women are regarded as something “other”. This is proof that the roots of patriarchy in cultural history run so deep because for men to consider women as “other”, they need to first consider themselves the norm. Creation myths stemming from patriarchal cultures explain the origins of humanity in this manner, claiming that men were created first and women were created not only second, they were also created from the man.

One of the most well known creation myths is the story of Adam and Eve from the Bible’s Book of Genesis. God takes a rib from Adam to create a woman. Adam, who was given the authority to name all creatures of God’s creation, declares, “This at last is bone of my bones and flesh of my flesh; she shall be called Woman, because she was taken out of Man.” (*English Standard Version Bible*, 2001, Genesis. 2:23). Not only does this story show that women were created second, God even had to take something from the man in order to do so. The creation myth continues to depict the woman in a negative light when she is tempted by the serpent to eat the one fruit God forbade her and Adam to eat. As a result, Adam and the woman who he names Eve are banished from the garden of Eden, a place of paradise. God punishes Adam, Eve, and the serpent, and his words to Eve were, “I will surely multiply your pain in childbearing; in pain you shall bring forth children. Your desire shall be contrary to your husband, but he shall rule over you.” (*English Standard Version Bible*, 2001, Genesis. 3:16). This story of the creation of women blatantly rationalizes the position of power men have over women and it shows that women are the origin of humanity’s suffering.

In Greek mythology, the first woman was Pandora. She was created by Hephaestus and Athena as instructed by Zeus, made in the image of the goddesses, and gifted by the gods different qualities such as beauty, but also the ability to lie and deceive (Grimal & Kershaw, 1990

p. 326-27). Pandora is best known in the myth of Pandora's Box, in which Pandora in her curiosity releases all the ills in the world. In another version of the myth, it was actually all the good in the world that she releases, and all that good returns to the heavens, leaving only evil for humanity (Grimal & Kershaw, 1990 p. 327). Regardless of the version of the tale, Pandora is firmly established in Greek mythology as the reason why men suffer from evils.

In both the story of Adam and Eve and Pandora's Box, there are two main similarities. Men came before women, and women were ultimately the cause of humanity's suffering. The myth of Medusa is not unique in depicting a woman as a terrifying enemy of man, and this negative representation of women is found throughout many other situations in the world. Some of these situations include interactive media, such as video games.

### **Women Portrayed in Gaming**

Video games have been catered towards a male audience since early in video game culture (Femenist Frequency, 2018). The gaming industry is a male-dominated field (found to be 71% male, 24% female in 2019), though the masculine portrayal in video games is specifically due to the prevalence of traditionally male-gendered themes and activities (Clement, 2021). In a study on representations of gender, race, and age performed in 2009, the ratio of male to female characters in video games was 85.23% to 14.77%, and the female characters represented were more often in secondary roles (Williams et al., 2009, pg. 824). In avatar-driven games, specifically RPGs such as *Medusa*, even if a character's gender is left ambiguous, they are typically assumed to be male (Femenist Frequency, 2018). Of the female characters in video games, many fall into tropes and stereotypes that reinforce patriarchal themes.

Lara Croft, from the *Tomb Raider* games, broke new ground as a female protagonist, but the hypersexualization of her character outside of the game and by members of the online

community has created a divide concerning appropriate and equal representation. This brought up questions as to whether the representation of this character is as progressive as some may believe. She challenges the norms of a patriarchal game structure while simultaneously being crafted specifically for that structure and that of the male gaze (that is, seeing women as from the eyes of a man; as sexual objects rather than human beings) (Kennedy, 2002).

Another game with questionable gender representation is the *Gothic* game series. The games have very few female characters across the three games. Most are decorative objects, and only *Gothic 2* has female characters who can distinctly change the player experience by training the main character's skills. Most female characters within this game series also have stereotypical gender role conformative occupations such as servants, dancers, and housewives. Furthermore, the player cannot choose the gender of the main character who is a stereotypical muscular, athletic, and heterosexual male. Excuses for the games' lack of diversity include its fantasy Medieval setting, technical limitations, and lack of time (Schröder, 2008).

A study which examined the representation of females within some of the most popular games for Sega Genesis and Nintendo (a total of 33 games were utilized in this study) was conducted in 1998 by the University of Central Florida. The study discussed the significance of how gender roles are ingrained into children at a young age. It also went into detail about children being constantly bombarded with reinforcement for stereotypical gender roles. In this sample of 33 games, it was found that more than half of these games had no female representation. Out of the few games that did have females portrayed within them, only 5 had the women as heroes or action characters while the other 7 of them had the women portrayed as the helpless victim/damsel (Dietz, 1998). This notable inequality and disparity in representation is commonly found throughout art of all ages. An academic article provides somewhat of a

synopsis of representations of female bodies throughout the history of art as well. This study through time has allowed an understanding that the female body in art has long had a history of being portrayed in a negative and objectifying way (Karius, 2011).

### **The Monstrous Feminine in Video Games**

The idea of the “monstrous-feminine” is that, within patriarchal societies, the ultimate form of horror is within the female reproductive body. The concept was put forth by Barbara Creed in her book of the same name (*The Monstrous Feminine*, published in 1993 by Routledge Press). She states that there is something about the female body that is seen as “shocking, terrifying, horrific, abject” (Creed, 1993, p. 1). This is shown, for example, in classical mythology which displays many of their gendered monsters as female, including Medusa herself.

Creed’s definition of abject is heavily influenced by Julia Kristeva who coined the definition in one of her essays. What Kristeva (1984) defines to be abject is that which is the opposing power of the object. The abject thrives in dismantling order, does not follow any rules, and lurks within the realm of the Other. Furthermore, “The abject is, paradoxically, associated with both fear and *jouissance*, as we are often both disgusted by and drawn” to it (Stang, 2018, p. 20). In the case of a patriarchal order, Kristeva points out that it is the female body that is abject, and it is femininity that becomes “a radical evil that must be suppressed” (1984, p. 70).

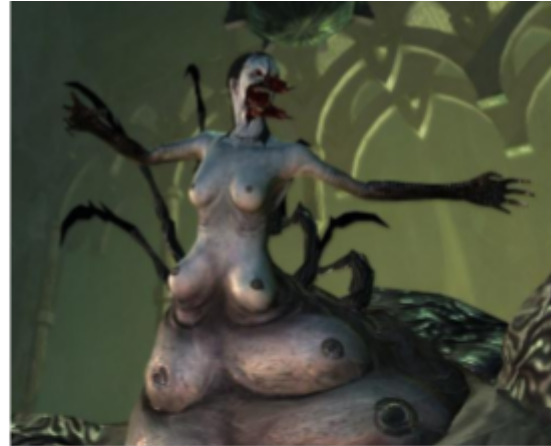
If the female body is the monstrous Other to be defeated, then this idea is only amplified in the realm of gaming, since games assist in framing the empowered female body as something that is abject and monstrous (Stang, 2018, p. 20). The typical premise of a lot of games is the (usually male) protagonist’s journey in fighting a greater evil. This evil can come as some kind of monster, an organization, or an entire fleet. However, feminist game scholar Sarah Stang brings up many examples of these evil beings possessing feminine power, both as female



reproductive bodies, and as female sexual bodies. Such examples as seen in the figure below are Kerrigan as the Queen of the Blades in *Starcraft* and *Starcraft II*, The Mother from *Dragon Age: Origins*, Siren Sybil from *God of War: Ascension*, and Sirens from *The Witcher 3: Wild Hunt*.



Kerrigan as Queen of Blades, *Starcraft* & *Starcraft II*



The Mother, *Dragon Age: Origins*



Siren Sybil, *God of War: Ascension*



A Siren, *The Witcher 3: Wild Hunt*

Figure 1: Monstrous Feminine in Video Games

Viewing the female body as monstrous and evil may make it easier for an individual of this worldview to treat women as enemies, justifying sexual and physical violence, which can cause trauma for the victimized individuals.

### Trauma

Our discussion of trauma is focused on that which is a direct result of sexual victimization (i.e., sexual assault, sexual harrassment, rape). Sexual victimization is a problem that affects the lives of many women and men alike. According to the National Intimate Partner

and Sexual Violence Survey, conducted by the CDC in 2015, roughly 44% of women and 25% of men in the United States have faced sexual violence. Sexual violence in this context is defined as “rape, being made to penetrate someone else, sexual coercion, and unwanted sexual contact” (Smith et al., 2018, pp. 2-3).

Although physical acts of sexual violence may last for only a brief period of time, the mental scars that they inflict will often last for years after the acts have stopped, a burden the victims will carry with them until their life’s end. There are several types of trauma and each with a different cause. Trauma caused by a single traumatic event is classified as acute trauma. Repeated traumatic events causing long-lasting exposure becomes classified as chronic trauma. Finally, when an individual experiences multiple traumatic experiences, they suffer from what is classified as complex trauma. (Leonard, 2020).

While trauma tends to be used as a blanket term, it is actually deep and complex. Eleven themes are commonly used to represent the layers of sexual trauma that victims experience in the midst of and after a traumatic event: “fear”, “helplessness”, “loss of meaning and sustaining beliefs”, “legitimacy and validation”, “self-blame and guilt”, “betrayal and loss of trust”, “shame”, “isolation and alienation”, “diminished sense of self”, “anger and rage”, and “grief and loss” (Lebowitz & Wigren, 2005). These themes are identified as layers because they are fluid, often overlap, and do not show up in a set chronological order.

### ***Trauma Representation in Games***

Video games give a unique perspective on trauma because of their interactive and reactive nature. Games are *interactive* in that they allow players to manipulate the game environment. They are *reactive* in that they change in response to the player’s manipulation (Smethurst, 2015, p. 41). Yet, a new term has been suggested by some to describe the mutually

reactive relationship between player and game: interreactivity (Smethurst, 2015, p. 42).

Interreactivity is accomplished when the game reacts to the player's actions and, in turn, the player reacts to the game's changing environment in a feedback loop (Smethurst, 2015). This solely applies to moments when the player is actively able to direct the course of the game (Smethurst, 2015), but this interreactivity allows for the expression of trauma in a more personal way (Kuznetsova, 2017).

One major way to express trauma in games is through the manipulation of player agency. (Kuznetsova, 2017, p. 32). In a typical video game structure, agency is given to a player by allowing them to play said game in whatever way they choose. They could choose to follow the rules of the game, or they can veer off and make rules of their own (Smethurst, 2015, p. 36). Evgeniya Kuznetsova argues that player agency can be manipulated to create insightful trauma narratives (Kuznetsova, 2017, p. 32). In traumatic events, agency is often stated to be something that is lost, so she suggests multiple ways to manipulate agency to represent this loss (Kuznetsova, 2017, p. 32).

One way to manipulate agency is through what she calls "controllable helplessness" (Kuznetsova, 2017, p. 47). This is seen in situations where the player is forced to act during an event that is inevitable, even though the event cannot be stopped no matter what actions the player tries to make. Another notable example used by Kuznetsova is in the game *Queers in Love at the End of the World* (Anna Anthropy, 2013). In this game, the player is given 10 seconds until the end of the world. In these 10 seconds, they are allowed to make choices that all surround the act of comforting their lover. No matter how the player chooses to console their lover, the world still inevitably ends in that time limit. All three methods can be used as tools to make the players feel powerless. The inability to change a situation and be forced to deal with

unwanted repercussions - especially negative ones - can cause an individual to face trauma and other negative effects of such a situation, such as paranoia and guilt. Having the player feel powerless is important to our game as many individuals who face sexual assault often feel powerless, and representing the trauma in a way that is representative of a true experience may have a stronger effect upon our player. Based on this strategy, we created a design that forced the player to follow a story and make actions that they may not have necessarily wanted to, which can be seen in specific cutscenes throughout the game.

### **Cognitive Biases, Perspective-Taking, Empathy, and How Games Integrate Them**

In this section we will discuss what cognitive biases are. We will also look into previous research done in relation to perspective-taking and empathy, and examine how others have tried to implement them in their games.

#### **Cognitive Biases**

An understanding of biases is crucial for this study as it focuses on designing a video game that will affect the player's level of empathy towards the main character of the game as well as their rape myth acceptance. Cognitive biases are deep-seated and omnipresent errors that can cause irrational thinking and understanding within human thought processes. Unfortunately, these biases are known for being obdurate to effect. According to recent research, cognitive biases commonly occur when automatic and intuitive reasoning leads to inaccurate conclusions which then remain unidentified and unmitigated (Barton et al., 2016).

## **Perspective-Taking and Empathy**

Acknowledging the effect of cognitive biases introduces the question of how one can learn to recognize and prepare for the influence of these biases when making decisions. Recent research and studies focused on the reduction of bias have looked to methods of inducing empathy and perspective-taking as possible solutions, although utilizing these methods has shown mixed results.

### ***Perspective-Taking***

There are a multitude of different strategies people use when attempting to infer what others are thinking or feeling, including but not limited to heuristics, stereotyping, and projection. One may expect that the more experience an individual has gained in a situation, the more informed and aligned that individual's understanding, emotional response, and reaction of that situation is with the target's (Campbell et al., 2014).

It is theorized that while engaging in perspective-taking, an individual tends to project themselves onto the target in order to try and see or experience things from the target's perspective, an act known as merging of the self and other (Galinsky & Ku, 2004). Research has found that one of the most effective ways to motivate a person to help another individual may be this method of encouraging them through "multiple motivational routes by asking people to imagine themselves *as* the other" (Myers et al., 2014, p. 233). Research has also suggested that utilizing perspective-taking in this manner has the potential for affecting biases. Specifically, this approach has been found to not only mitigate harmful beliefs towards individuals or groups of individuals who are different from oneself, but also increase positive emotional reactions towards

others. This effect has also been persistent through virtual means (Hasler et al., 2014 as cited in Schrier, 2018).

Schrier (2018) found that communicating directly with another individual and enacting perspective-taking behavior, provided a greater understanding of another person. It is important to note that Schrier made no distinction as to whether or not this influence could be attributed to the contact hypothesis (i.e., intergroup contact leading to a reduction of prejudice and better attitudes between groups). Even so, perspective-taking allows for the “merging of the self and the other”, that is, an individual tends to project their likeness onto the target in order to try and ‘walk in their shoes’ (Galinsky & Ku, 2014, p. 596). Perspective-taking is less of an automatic response, and more of a “light switch that must be switched on when needed” (Epley & Caruso, 2009, p. 302). This “switching on” can be difficult for some, as their own prior knowledge and experiences can cause them to become stuck within themselves, thus making it challenging to acknowledge the different experiences of others. When attempting to understand another’s attitude, it is common for individuals to use themselves as a point of reference. However, this only succeeds in bringing the individual further into their own attitude.

Egocentrism also tends to overpower a person’s ability to perspective-take. When trying to take the perspective of an unfamiliar and distinct individual, stored knowledge may be used. This stored knowledge can present itself as stereotypes, creating a base for biases and inauthentic perceptions of an individual’s perspective and experience (Epley & Caruso, 2009). The ego may also overpower perspective-taking through what is called “reactive egoism”. This occurs when an individual’s skewed perspective contaminates the interpretation of other individuals, causing their perspective-taking experience to become inaccurate (Epley & Caruso, 2009, p. 307).

It should be noted that perspective-taking may have the opposite of the intended effect. It is possible for perspective-taking to fail and instead cause a person to feel intimidated (Epley & Caruso, 2009). It should also be noted that it may not accurately predict the views, mental state, emotions, and attitudes of the other.

This act of perspective-taking allows for an individual to consider others through the lens of embodied care. This is significant as it may provide an opportunity for allowing individuals to feel deeply about situations even if the individual themselves has had no experience with the situation by utilizing caring imagination. One of the major foundations for this experience is empathy (Hammington, 2004, p.62).

### ***Empathy***

While perspective-taking is the active effort of understanding another person's way of thinking, empathy is more focused on feelings and emotion. Rather than merging the self and another, some believe that empathy comes with the awareness that one's emotions is a reflection of another's (Stietz, 2019, p. 1). Opposing this is the idea that empathy is simply the ability to understand others without necessarily assuming their affective state (Michael, 2013).

Beyond the psychological definition - or rather building off of it - empathy is also defined by the imaginative capabilities of an individual. Imagination holds a primary position in our ability to feel the emotions of others. Without it, an individual would not be able to even comprehend the experiences of others (Hamington, 2004). Empathy makes it possible to figuratively experience the lives of other people. This is not to be confused with sympathy, which is more situational and garnered through unfortunate events. Empathy can be applied to both positive and negative feelings, though it is more obvious with the latter (Sietz, 2019). Undergoing similar emotional situations to another individual produces the capability to mitigate

“empathy gaps” that occur whenever an individual is unable to correctly anticipate, interpret or understand another's emotions (Campbell et. al, 2014, p. 272). As empathy plays a role in one’s perception of another individual, it is likely that empathy may also become interlaced with cognitive biases, and therefore may affect a person’s opinions and stereotypes of other individuals or groups.

Studies focused on the effects of empathy have shown that inducing empathy for one member of an outgroup can cause it to spread to the rest of the outgroup. As an example, a study published in 2013, centered on empathy manipulation, found that “inducing empathy toward an Asian American movie character reduces explicit prejudice towards other Asian American Individuals” (Shih et. al, 2013, p. 79). This suggests that empathy has the capacity to change implicit attitudes and reduce prejudice among groups of people at both implicit and explicit levels (Shih et. al, 2013).

Similar to perspective-taking, gaining too much experience in a particular emotional situation is found to mitigate the extent to which another person can understand the emotions of others (Campbell et. al, 2014). However, it is important to note that empathic accuracy is both difficult to achieve for individuals and difficult to measure, just as it is difficult to know exactly what is going on in another person’s head (Hodges et al., 2015). Gaining an abundance of exposure in a certain situation may actually cause one to become worse at identifying and understanding another’s emotions when they are placed in a similar situation for the first time. This is theorized to be specifically due to the individual being “unable to disentangle self-change from other-oriented thinking” (Campbell et. al, 2014, p. 272). In other words, a person who has experienced similar emotional situations repeatedly becomes numb to that feeling they had the first time, and they end up believing that their desensitized emotions are still



valid to the feelings of others. This causes them to have an empathic disconnect where they can't accurately gauge what others are feeling in that given situation. Thus, too much experience in any case can lead to desensitization (Campbell et. al, 2014, p. 273).

### ***Desensitization***

While perspective-taking may allow people to better empathize with others, too much can lead to desensitization (when individuals are not as stimulated by a situation as they were initially). Desensitization of an individual can, among other things, lead to misjudging and misunderstanding the reactions of those around them. According to Campbell et al. (2014), people tend to judge the feelings of others by first putting themselves in that situation (perspective-taking) and looking at their own feelings for an answer as to how the other person would feel. If the perspective-taking individual is desensitized to the event or stimuli in question, however, their emotions will be skewed and thus an indirect conclusion will be drawn, the severity of which depends upon the level of desensitization. Campbell et al. (2014) also found that, "People who became desensitized to a negative stimulus reported they would feel less bad about causing others to experience it" (p. 279). This lack of consideration can go even further, with the desensitized individual - knowingly or unknowingly - forcing others into harmful situations because they believe others are just as familiar with them.

The results of studies have shown that empathy and perspective-taking hold potential for being methods of altering cognitive biases. However, the negative effects they may create—such as prejudice, stereotyping, and desensitization—should not be ignored, as they can negatively impact an individual. Although we are unable to guarantee an individual's reaction to utilizing perspective-taking in studies, it is a common activity within our society. One medium which

heavily relies on perspective-taking is interactive media (such as video games).

### **Reducing Bias Through Gaming**

Video games are an interactive media platform that provides instances for users to experience and consider events that they otherwise may not have. They also present players with the opportunity to witness another individual's perspective of events, some of which may be tied to real world experiences. This opportunity to have the player experience and learn from events through interactive media has created a genre of video games focused on presenting psychological, ethical, and philosophical messages. These games are often designed outside of the typical entertainment focus and are called "serious games" (Barton et al., 2016).

Players often take the role of the protagonist in video games, providing them with an opportunity to project themselves onto the character, seeing the character as an extension of themselves. Oftentimes throughout playing a player's "projective identity grows stronger, allowing them to increasingly *feel* or *suffer* what their avatar experiences" (Kaatz et al., 2017, p. 3). This occurrence of growing a projective identity between player and character suggests that games which allow an individual to adopt the identity of or play as a character provide opportunities for "players to develop empathy for an avatar character" (Kaatz et al., 2017, p. 3). Research focusing on the effectiveness of serious games has provided supporting data suggesting that a player who experiences projective identity may also experience a state of active learning called embodied cognition. This state of learning allows the individual to feel as though they are really a part of the game and that the game is a part of their reality (Kaatz et al., 2017).

### ***Role-Playing Games***

When researching the effect of accomplishing tasks with a virtual character within role-playing games, Schrier found “that players used more empathy-related skills, including perspective-taking” (Schrier, 2018). It is to be noted that the similarities between a player and the character they play as may have an effect on the player's biases and perspective-taking.

Research focused on how a player's character affects their gameplay and engagement suggests that, emotionally, players may form a stronger connection with their character when their gender and race are an identical match (Kaatz et al, 2017). A study conducted by Behm-Morawitz, Pennell, & Speno (2016) investigated whether creating an avatar within a game had an effect on whether the participants took on the perspectives of others. Results from the study showed that, after creating and playing as a Black avatar, participants' attitudes about African American men and minority-supporting policies were more positive and favorable than those who played as a White avatar. (Behm-Morawitz et al., 2016). Similar findings have been reported in other studies. Peck et al. (2013) found that participants who had lighter-skin had a reduction in their biases associated with dark skin when they played as a dark-skinned character. It is important to note that the game context may matter, as it has the ability to mitigate or enforce biases. As an example, a study performed by Yang et al. (2014) found that participants had strengthened negative beliefs towards Black individuals and played their character significantly more aggressively when they played as a Black character within a violent video game as opposed to a White character.

A game titled *Fair Play* was created to create a foundation set for learning whether experiencing the role of another individual would affect a player's implicit biases towards the target's demographic group (Gutierrez et al, 2014). Although a fairly new method used in

perspective-taking, the researchers felt that a video game would be effective due to its ability to allow players to induce a state of projective identity (the merging of a player and an avatar's identities, similar to self-other overlap), as well as being easy to disseminate. The game focused on having the player live through experiences of an African American male within a graduate school program who is subjected to biases of others. The experience the designers hoped to achieve was one in which the player would become more bias literate and have more empathy for the character's demographic groups and therefore have lower implicit bias levels towards those groups. To test this, the researcher had the participant take an implicit association after playing the video game. This test was designed to measure the levels of implicit bias towards Black individuals as compared to White individuals. These implicit bias levels were then compared to another test group who were exposed to a traditional passive perspective-taking activity (in this case reading a narrative) instead of the game. They designed their game around the experience of living the life of a black researcher which forced empathizing and perspective taking. The results of the numerous studies suggested that the players did enter the state of projective identity and lowered the player's racial implicit biases (Gutierrez et al, 2014; Kaatz et al, 2017). This suggests that there may be a method that can mitigate implicit biases of individuals. The results also indicated that the focus on bias literacy education within the game was effective in teaching players about biases. This absorption of knowledge was hypothesized to also produce lower implicit bias levels, suggesting that educational components in games may also have a role to play in mitigating cognitive biases (Kaatz et al, 2017).

### ***Educational Games***

In addition to the studies utilizing the video game *Fair Play*, researchers also designed studies to understand more about whether educational interactive media had stronger effects than

non-interactive media such as videos. These studies utilized a different game series: *Missing*, and hailed results which suggested that the *Missing* series provided higher levels of understanding in cognitive bias mitigation than an educational control video which covered the same topic. This “lends support to the idea that serious games may be more effective for training than standard approaches such as educational videos or lectures” as well as efficient tools for mitigating cognitive biases (Barton et al., 2016).

In 2014, a group of experts created MACBETH (Mitigating Analyst Cognitive Bias by Eliminating Task Heuristics), a training game with the purpose of improving decision-making abilities of intelligence analysts, specifically in terms of having “greater systemic processing, and less reliance on cognitively based heuristics” (Dunbar et al., 2014, p. 1). This project looked to address the issue of the effect cognitive biases have on accurate data collection. The results of the study indicated that the game was effective, “implying the knowledge gained by playing MACBETH appears to be internalized and retained” (Dunbar et al., 2014, p. 7). The study results also indicated that providing a priming condition for players had more impactful effects, suggesting that methods that align closely with explicit training (such as quizzes) are effective training methods to be utilized within a game (Dunbar et al., 2014).

### **The Overall**

Clear and comprehensible feedback as to how an individual’s actions are capable of affecting others is important in any learning situation. Feedback helps individuals succeed within a learning environment. Video games often utilize providing the player with important feedback which informs players how their actions affect the game world around them.

It is essential to understand and reflect upon the potential ethical ramifications of gameplay design when utilizing or playing games which have been designed with the intent of

reducing bias. Games provide the possibility to allow individuals to have experiences they may have never been able to otherwise. This provides the potential to present players the opportunity to see life through another individual's eyes and "give glimpses into different aspects of humanity, even if they cannot perfectly simulate a system or how someone feels, thinks, dreams or acts" (Schrier, 2018, p. 69). Utilizing this allows a creator to impact player's similar to the way in which events within their life may. Therefore, it is imperative that the potential effects of these experiences are thoroughly considered before individuals are able to interact with them.

### Medusa: The Design and Creation

Because our game is supposed to foster empathy, we decided to incorporate perspective-taking in our design. In order to counteract some of the challenges that come with perspective-taking as we previously discussed, we chose to first put the player in a common position. By having the player first play as Perseus, we are putting them in a familiar perspective: that of the typical male hero, a character that exhibits the stereotypically masculine traits of strength, arrogance, and a distinct lack of empathy. Partway through the game, we then shift the game's perspective to that of Medusa, with the hopes that having the player take Medusa's perspective will increase the level at which players empathize with the character, as well as lower rape myth acceptance values (as the player will experience a sexual assault survivor's perspective).

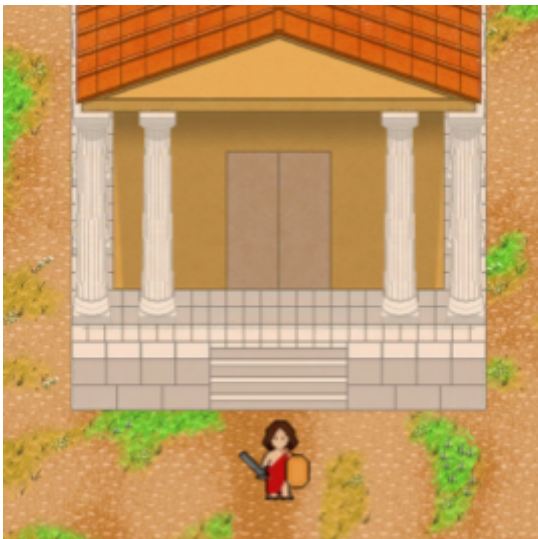


Figure 2: Perseus Gameplay Introduction

The first section of the gameplay was designed to mimic the classic RPG format in which the player takes the role of a hero set out to complete a quest, as seen in Figure 2 to the left. Many individuals are familiar with the story of Medusa in the frame of Medusa being an evil monster in which the mighty hero Perseus defeats at the request of the goddess Athena. This point of view of Medusa's tale is the one in which the first part of our game is set. As the player plays as Perseus, the mighty male hero,

stereotypical patriarchal themes from both the mythological tale and the classic RPG framework of video games are portrayed throughout gameplay. Foremost, Perseus himself is representative of the mighty male fantasy in which men are ultimately powerful, heroic, and needed by others.

This is enforced throughout the game as Perseus is going through the land and repeatedly helps individuals in tasks that they are otherwise incapable of completing themselves. Another patriarchal theme reinforced throughout the Perseus gameplay is the ties between patriarchy and speciesism; specifically, the slaughter of animals. The player is forced as Perseus to kill seemingly ‘mindless animals’ throughout the land on their quest to defeat the “beast” Medusa, seen in Figure 3 to the right. This depiction of animals reinforces patriarchal ideology because emotional intelligence is taken away from these animals, as they are



Figure 3: Perseus Killing Animals

merely seen as objects to be killed. Empathy towards them is simply nonexistent (Kheel, 1996). Beyond that, this hunting for sport comes with a moral dilemma that it is not a mutual agreement between Perseus - the hunter - and animals within the game. It is a separate one-sided “game” in which the animal’s life is put on the line for amusement. All for the sake of fulfilling man’s

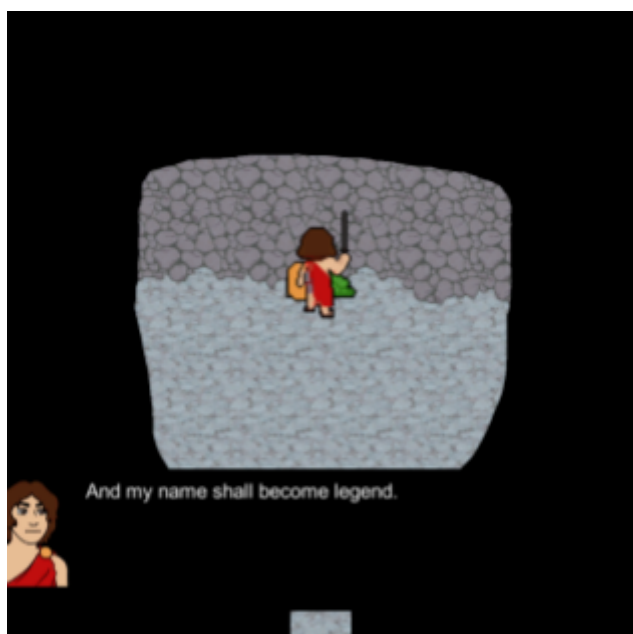


Figure 4: Perseus Preparing to Slay Medusa

rotten desire for aggression masked as “necessity” (Kheel, 1996, pg. 37). This slaughter is also rewarded by the non-player characters, reinforcing that the mighty male hero is being rewarded and praised for the “heroic” slaughter of living creatures. The final scene of the Perseus section reinforces many of these patriarchal tropes. This is largely portrayed throughout the



dialogue Perseus gives as he prepares to deliver the killing blow to Medusa who lies quietly on the floor, as seen in Figure 4. The dialogue heavily emphasizes victim-blaming and how Perseus will be regarded as a hero for slaughtering Medusa. The scene ends with the final blow.

Medusa's story comes with multiple different retellings, but the one that most people are familiar with is the one in which Medusa is portrayed as a beautiful maiden who seduced Poseidon in Athena's temple. Athena punishes the seductress by cursing her so that any who may look upon her beauty would be turned to stone. Ovid's *Metamorphoses* provides a different perspective of the tale, in which Medusa was viciously raped by Poseidon in Athena's temple, and later cursed for no other crime than being present at the defilement of the temple. This story of Medusa holds a lot of parallels with assault stories from survivors today. Through no fault of their own, a man takes advantage and forces himself onto them, and in the end, they are judged harshly for it. Instead of being cursed with the power of petrification, these women are given the curse of shame, doubt, and of carrying the burden of being blamed for their assaults.

In a patriarchal society, men are the head of the family and women are below them. This was especially true in ancient Greece, where our game takes place. For the most part, women were reliant upon the men in their life, whether it be their father or husband. They had no freedoms of their own and were, for the most part, confined to the home to provide domestic care. Women were most often judged for their beauty and seen more as objects rather than people.

This subordinate role of women plays a large part in the story of our game as Medusa is a priestess to the goddess Athena who has sworn an oath of chastity. This later causes problems for Medusa in her town as she is not currently "owned" by any man yet will not accept the approaches of any. As Medusa goes about her responsibilities as a Priestess, we see many men

attempt to court Medusa and learn more of her backstory. It is revealed that she became a Priestess to Athena because the Head Priestess Agatha took her in from the streets, and she feels everlong gratitude towards the Goddess and Priestess. However, even when expressing this pure gratefulness and attempting to go about her duties, she is insulted for turning down a male's advances, highlighting the patriarchal culture of the town in which she resides. Throughout this section of the game, the player is not granted any real autonomy. This is to represent the lack of



Figure 5: Medusa During the Festival

choice and freedom that women face within such a patriarchal society. This is also represented by the males celebrating and having no responsibilities while the women are tasked with completing duties even during a festival, as seen in Figure 5 above.

In general, there were very few options for women to strike out on their own and be their own person. Medusa is in one of such situations. As a priestess of Athena, she was allowed freedoms that most women would not have in exchange for her service. With the vow of chastity required to become a priestess, combined with her beauty, Medusa represents somewhat of a forbidden fruit. Men saw her beauty as desirable and the fact that they couldn't have her due to her status as a priestess made them want her more. This is something we wanted to show through our game. Initially, we had designed a cutscene within the game where Medusa would be surrounded by men on her way into town as they made provocative comments and indirect sexual threats. The men would then be interrupted by Medusa's mentor, and Medusa would be

scolded for being a part of such a situation, even though it was not a willing choice of Medusa's. This scene was designed with the realistic situations many women face in modern days where they are not only exposed to similar situations but also scolded and blamed for the situation. However, due to limitations, this scene was unable to be created for our game. Instead, we made it so that men would often openly flirt with Medusa and make unwanted sexual advances on her through the dialogue (specifically in the scene where she is performing her priestess duties of collecting offerings at a festival for her goddess). This idea was to help simulate the circumstances which women often face today in terms of cat-calling or sexually explicit remarks. Fortunately, feedback gathered from multiple playtestings of our game indicated that participants felt the same sense of discomfort and were as appalled by the non-player characters' actions as our original design had been designed to create.

Once within the temple (as can be seen in Figure 6 below), the sexual assault cutscene



Figure 6: The Temple Cutscene

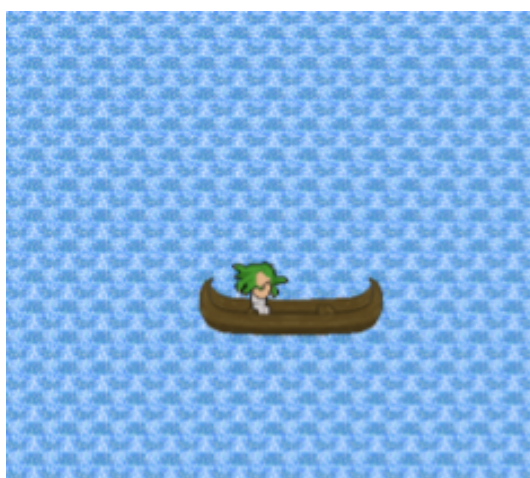
begins. Medusa is seen worshipping Athena's statue when she hears a door open and close. The man who insulted her for turning down his advances at the festival earlier had followed her to the temple. His aim is to gain revenge for his harmed ego by forcing Medusa to comply with his wishes.

We wanted to reflect the psychological effects of sexual assault on the victims within the game. As mentioned, there are 11 themes that represent the layers of trauma

on an assault victim (Lebowitz & Wigren, 2005). In order to craft a believable narrative and appropriately represent the story of an assault survivor, we worked on incorporating these themes

into our story and our game as a whole. We represented the fear, helplessness, and freeze response that victims often feel during the scene where Medusa is assaulted by Poseidon. We decided to remove the control from the player, only allowing them to advance the dialogue. This forced the player to experience being helpless and facing a situation they had no control over, along with whatever repercussions it may come with. In the midst of sexual trauma, intense fear is a common feeling that triggers the fight or flight response within the brain. However, there is another response fear can trigger called the freeze response. This biological response occurs when the likelihood of escaping danger seems nonexistent. Freezing often leads victims to dissociate during (and after) the violence being acted upon them (Lebowitz & Wigren, 2005, p. 4). This was represented by having the scene fade out (an abstract representation of disassociation caused by the freeze response). After becoming conscious once more, Medusa reaches out to the powerful figure she trusts, Athena, for help but is only blamed for what happened and punished, resembling the reality many victims of sexual assault suffer from today.

The loss of meaning, shame, and isolation are represented through the first part of the gameplay after Medusa has been cursed. As this loss of meaning often brings up feelings of



**Figure 7: Medusa  
Contemplation Cutscene**

confusion as victims try to make sense of their altered worldview (Lebowitz & Wigren, 2005, p. 9), the player is thrust into chaos as Medusa attempts to run away while being chased by guards who she ends up turning into stone. The player is prompted to flee the temple, and the city as a whole, sailing to a small island where Medusa hides (as seen in Figure 7). Shame prevents a lot of victims from speaking out or seeking help. This

silence is further rationalized by the stigma surrounding rape, and the belief that victims are raped because of something that they did to warrant such attention (i.e., how they act, what they wear) (Lebowitz & Wigren, 2005, p. 16). This is represented by the player fleeing from the town rather than reaching out to others for help. This traumatic event, inevitably, makes victims lose trust in humanity, hence Medusa sails to the island where she lives in isolation, away from any and all human civilization.

The theme of helplessness was depicted in a cutscene shown immediately after Medusa flees town. Feelings of helplessness often settle in when victims start trying to make sense of the situation they endured. Many feel like they should have had more control over what happened to them, and the fact that they had no say in the violence that took place makes them feel powerless (Lebowitz & Wigren, 2005). They resort to thinking that they somehow “allowed” the trauma to happen to them, even though they could not have had any control of the situation. This is specifically shown through Medusa’s inner dialogue within the cutscene. Legitimacy and self-blame are also embodied through this cutscene as Medusa begins to try to rationalize the events she lived through, putting the blame of events on herself and not on Poseidon or society. Self-blame is prominent among sexual assault survivors because the victim thinks about all the things they did that made them a target, or all the things they could have done to prevent it, without realizing that they are not the ones at fault (Lebowitz & Wigren, 2005).

One of the final themes, grief, is shown in the last scene of the game when Medusa reaches the island and finds a cave to hide in (portrayed in Figure 8). As she curls up in a



Figure 8: Medusa Crying in Cave

corner of what is now her new home, she begins to sob, fully coming to terms with the cruelty of the transpired events. By designing our game this way, we hoped to convey the grave aftermath of sexual assault and/or violence and spread awareness about it.

We designed the ending of our game to ensure that players made a connection between the themes within it and our society today. To this end, we took clippings of news articles with headlines referencing rape and stitched them into a video (seen in Figure 9). These articles were



Figure 9: Ending Video




meant to symbolize the prevalence and awareness of rape within our society, as can be seen in the speed at which they appear. They appear slowly at first, allowing the player to read the entire article headline and absorb the information between each appearance. The articles then began to fade in faster, covering the other ones already on screen. Eventually the articles appeared so rapidly that the player would not be able to read them all, overwhelming them. Once the screen



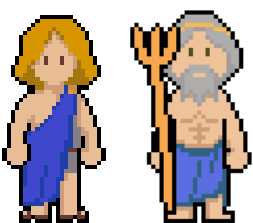


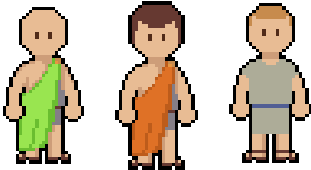
was completely covered, the articles all faded out, to be replaced with a single line of text: “The devastating effects of rape and the dismissal of survivors’ realities has carried on for centuries and is still alive and thriving today”. This sentence reinforced the connection between our game and the real world, making it nearly impossible to miss. Over all the articles, somber piano music played, along with a team member reading quotes from sexual assault survivors. The quotes were included to provide more context about how devastating sexual assault can be to survivors, and was paired with the piano music to make the video more emotional. While we were initially concerned that the combination of music and voice would overwhelm the players, a brief

pre-testing suggested otherwise. The music and quotes lasted until all the articles faded out, leaving the players to reflect in solemn silence as the sentence appeared, followed by credits for the music and quotes, before eventually being left with a black screen.


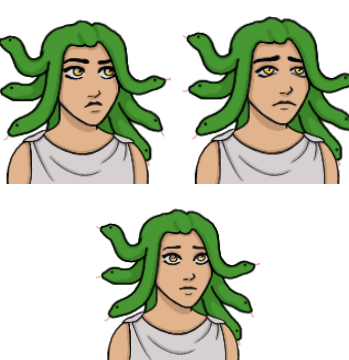



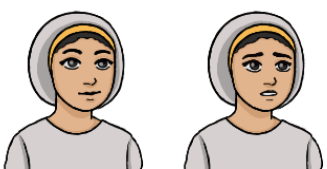
### The Creation Process


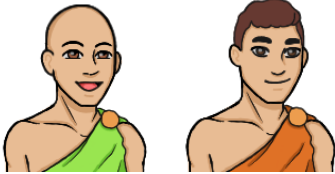




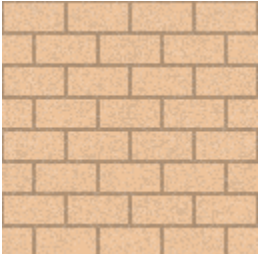
The table below features the artwork presented within *Medusa*. As can be seen, the table provides screen captures of the artwork as it appears in the game, a brief description of the artwork, as well as any significant references.

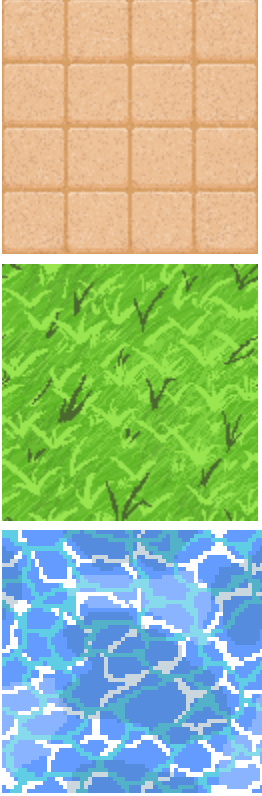
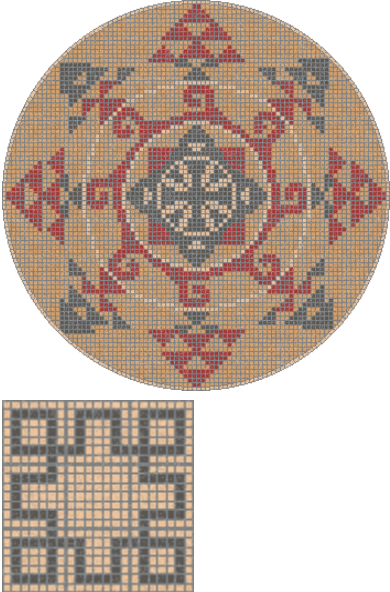

Figure 10. Artwork in <i>Medusa</i>		
Image	Description	Reference
<i>Character Art</i>		
	Medusa as a priestess (left), and after she was cursed (right). She is dressed in white to symbolize purity.	N/A
	Perseus dressed in a red tunic as a symbol of courage and a signifier of danger.	Perseus as seen in the <i>Clash of the Titans</i> (1981) movie. 

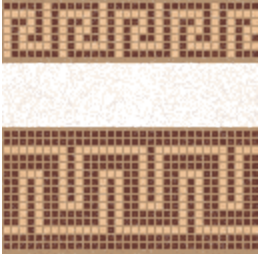
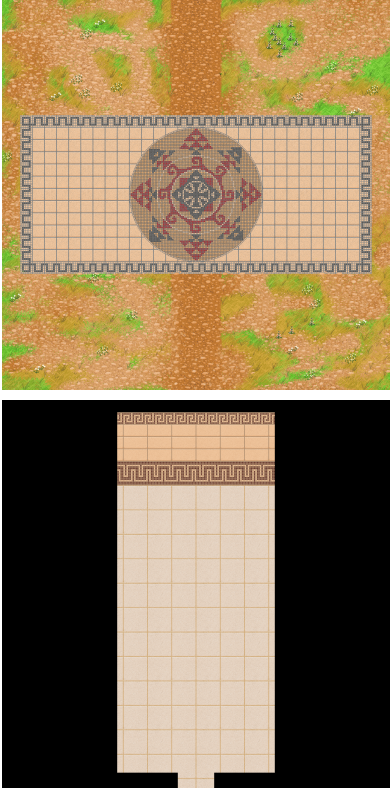
	<p>The marble statue of Athena that was placed in her temple. She is dressed in all gold.</p>	<p>A reconstructed <i>Athena Parthenos</i> statue originally by Phidias, found in Tennessee.</p> 
	<p>Poseidon in his disguised form (left), and as his true self (right).</p>	<p>As depicted in statues and paintings.</p>
	<p>Priestess Agatha</p>	<p>N/A</p>
	<p>Greek soldiers dressed in classic armor.</p>	<p>Inspired by the uniforms of Spartan soldiers.</p>
	<p>Three additional non-playable characters (NPCs). The first two are seen in the festival area, and the last is the boatman seen at the docks.</p>	
<p><b>Character Portraits</b></p>		<p>*All character portraits were drawn from their pixel forms.</p>


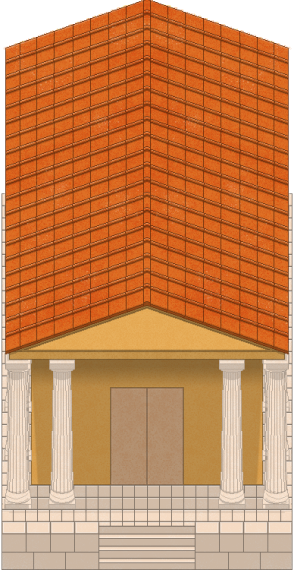


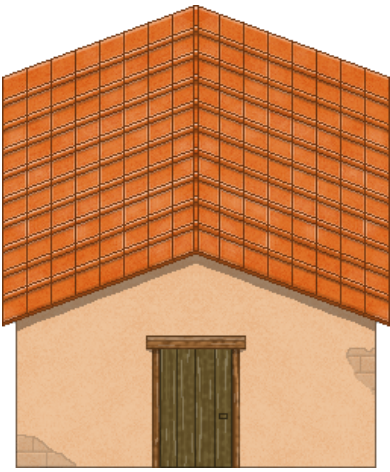
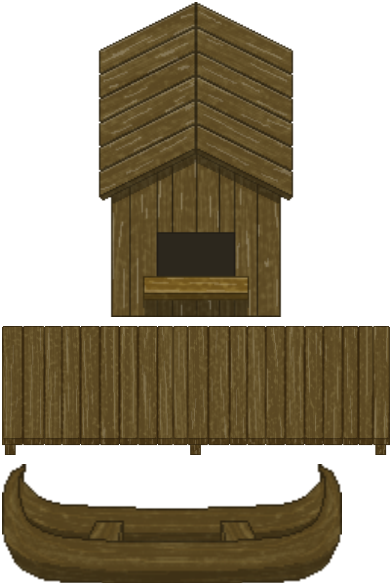


	<p>Character portraits of Priestess Medusa in various moods. Expressions from left to right: neutral, frightened, sad</p>	
	<p>Portraits of Cursed Medusa. Expressions from left to right: contemplative, sad, worried(?)</p>	
	<p>Portraits of Perseus as neutral (left) and angry (right)</p>	
	<p>A portrait of the statue Athena.</p>	
	<p>A portrait of Poseidon in his disguised form (left) and his true image (right)</p>	
	<p>Priestess Agatha in a neutral expression (left), and concerned (right)</p>	



	Portrait of a Greek soldier.	
	Portrait of two NPCs.	
<b>Animal Art</b>		*Real life animal references were used for all animals except the harpy
	Lion	
	Lioness	
	Boar	
	Harpy	Depictions in art and media.
<b>Textures</b>		
	Textured tilesets for the map walls, floors, and outdoors	

		
<b>Mosaics</b>		
	<p>A unique circular mosaic and several more typical Greek mosaic patterns</p>	

		
<p><b>Maps</b></p>		
	<p>Examples of an outdoor and indoor location using the textures and mosaics from above</p>	
<p><b>Flora</b></p>		

	<p>Inspired by native Greek plants such as cypress trees and Bear's Breeches, the national flower of Greece</p>	
<b>Structures</b>		
	<p>Athena's temple inspired by the Parthenon, columns are based on the Doric order</p>	

	Medusa's house	
	Boathouse, dock, and boat	
	Entrance of Medusa's cave	
<p><b>Decoration</b></p>		
	Furniture	

		
	<p>Extra items for decoration, the book is interactable</p>	

One of the first points of critique the team addressed in design was the choice of monsters within the game prototype (giant spiders were the monsters used within the original paper prototype which can be seen in Figure 10 above). Participants noted that they didn't understand "why they [the giant spiders] specifically were chosen" to be the monsters depicted within the game. Participants recommended "choosing a different monster" such as "rats instead of spiders". The team later rectified this issue by changing the monsters to ones that would have been found in Ancient Greece or Ancient Greek Mythology, such as the Harpy pictured in Figure 10 above.

Alongside the monster choice, another more major point of critique was the realism of the trauma depicted within the game. Many of these mentions tied in closely with lack of player control (a large critique area mentioned below). This is because many participants noted that "it would be nice to give players the option to choose as in real life, how they would react to the atrocities done to them" such as providing player choice in action in ways such as allowing them to "run in terror, or lash out in anger and grief". Players suggested that this lack of control and option in reacting to the traumatic situation made the depiction of the trauma itself seem unrealistic. The final response recorded that mentioned trauma depiction realism stated that the forced story progression felt "extremely quick" and left out time and depiction for the "grieving

patterns” Medusa would have experienced. Overall, they commented that the depiction of trauma within the prototype “felt a little bit off”. To address this concern, the team designed and created cutscenes within the video game to help depict the trauma more realistically. One of the main cutscenes designed with this purpose is the scene where Medusa is alone on the boat after escaping.

Player control was also a large area of critique for the first iteration of this game. As previously mentioned, there was an overlap between feedback discussing trauma depiction realism and feedback focused upon player control. Two such responses suggested that the game provide “more agency as Medusa” specifically in the way she reacted to the traumatic events she experienced. These responses noted that providing the player the option to allow “the character to act and, even in a small way, empower herself, would have been a catharsis”. Other responses merely stated that allowing for more control over Medusa “would make the gravity of the circumstances hit harder” since it would allow the illusion of control to the player but they would still end up facing the “same outcome but by their own means”. Multiple responses also reported that the reasoning behind Medusa fleeing from the town was unclear, especially given that she had gained the power to “turn all of her pursuers to stone”. These responses suggested that the game provide more aggressive options for Medusa to act upon rather than simply forcing the player to flee to an island. The final response discussing lack of player control also referenced this confusion. This response specifically stated that the player found their “lack of control over Medusa” off-putting, specifically because “the village was able to force her out” even though she had “just acquired godlike abilities”. The team agreed with these responses, however, due to time constraints (further discussed in the Limitations section of this report), no active changes were implemented to address this critique area.



The game art was also another section of the game we aimed to collect critique and feedback on throughout all prototypes. The initial visual feedback was received in the playtesting, and helped to point out major design flaws that the team had not considered, such as the appearance of the statue of Athena within the temple, seen in Figure 3 to the right. It was found that the statue was confusing to players as it had been shown to them with symbols of another god, creating confusion about the story as Athena was mentioned but the god shown cursing Medusa was not depicted to be Athena. We updated the statue in later iterations of the game to look more like the typical statues that depict the Goddess Athena, as can be seen in Figure 4 to the left.

The Alphafest version of the game had the environment drawn with relatively simple textures, objects, and structures. It was all concept and placeholder art to be replaced by improved and more detailed art in the following versions.

It was brought to the attention of the team by the team's advisors that the architecture needed a coherent design suitable for an ancient Greek setting. There are different architectural orders throughout Greek history. The Doric order was chosen because it was the earliest and simplest. Since the story of Medusa is a myth, there is no exact time period when she might have lived. The earliest order makes the most chronological sense. The second reason for choosing the Doric order was because the pillars of Athena's temple in the game was the only place with any identifiable architecture. The temple was already a complex structure to create, so having simpler designs for the pillars made it easier to draw the temple.

All art was redone for the playtesting version of the game, with the temple drawn with Doric order pillars. While this version was in development, one criticism was on the accuracy of the Greek landscape. The initial textures for the playtest version had a very generic lush green

grass whereas actual Greek landscapes was drier and had more shrubs as can be seen in Figure 11 below on the left. After this observation, we altered the maps to reduce the amount of grass

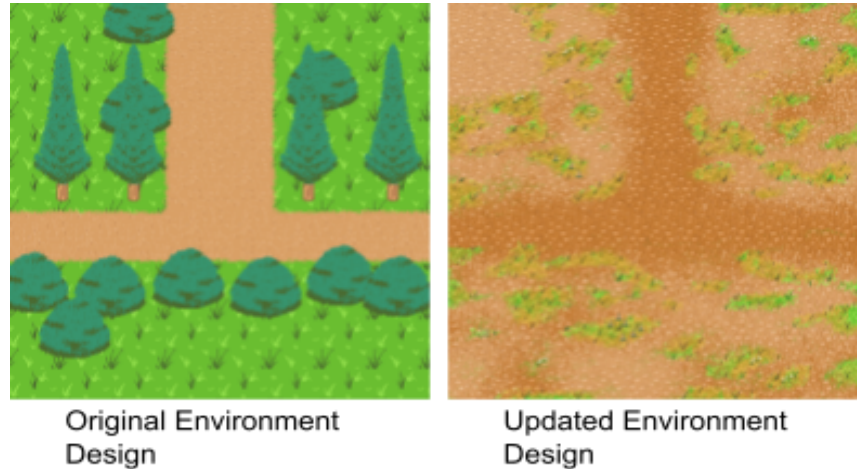


Figure 11: Environmental Design Update

covering the ground and to change some of the grass color to give it a more dry appearance. We also added flowers for some variety. Though two of them were fairly generic flowers, one was based on the national flower of Greece, bear's breeches. The updated landscape can be seen in Figure 11 above on the right.

Other complex structures to improve were the rooftops of Medusa's home and the temple. Concept art defined the tiles of the roofs but had no depth to them. The roofs were redone to have raised ridges so the roofs wouldn't look so flat.

Lastly, there needed to be mosaics and lots of painted pottery decorating the indoor and outdoor locations. The mosaics were made to be geometrical on top of being aesthetically pleasing. Pottery was also designed with patterns for decoration

The expression of the storyline was a vital part of our game and so utilizing the narrative potential to render our game impactful and understandable was essential to the design process.

The dialogue is a component of our project that has been continuously updated with each

iteration of the game. Initially, paper prototype testers shared that they were confused about why the story progressed in the manner it did. This specifically brought up confusion about why Medusa left the village rather than stay and turn the people attempting to kill her to stone. There were also suggestions given from participants about making some of the interactable objects within the game optional as they felt these objects, though useful for providing more background to the storyline, were unnecessary for basic playthroughs of the game.

One area of concern the team had throughout the design portion was the how engaging and entertaining the gameplay would be for the player. Throughout the first testing, feedback from participants stated that they would like more engaging gameplay as they felt it was a very “simple game”. In a similar vein, participants expressed dissatisfaction with their inability to interact with different objects within the game world. These two points were addressed when the team added in the Perseus section of the game. This brought more options for interaction between the player and the gameworld as well as increasing the engagement of the gameplay.

Another area of concern was visual feedback. Players expressed confusion as to what was happening, as the visuals did not show it clearly enough. They were unclear of what was occurring at times, including confusion at which character was speaking. We rectified this by adding portraits to dialogue boxes and enhancing visual impact from the game seen in Figure 12 below, as well as adding audio feedback.



Figure 12:  
Updated Textbox Now Showing the Speaking Character

Screen captures and photos of all versions of the game can be seen in the Appendices (Appendix A hosts all paper prototype versions of the game and Appendix B hosts screen captures of all electronic iterations of this video game).

Now we will briefly highlight a few of the key technical elements of Medusa, the choices behind them, and how they are implemented within the final game.

### *Changing Scenes*

In most games, the world is represented as one large area. In Medusa, however, the choice was made that each area of the game would be represented in its own distinct part, known in Unity as a scene. The issue then came with transitioning from one scene to another. Several of the scenes have different areas you can enter them from. For example, the intersection scene,

shown above in Figure 11, can be entered from outside of Medusa's house, the festival center, and the marketplace. These three entry points require three different locations for the player to spawn when the scene starts. To solve this issue, a custom script was created that does the following:

- Checks the current scene name
- Checks the previous scene name
- Uses that information to determine the location to spawn the player

This was implemented in a Unity prefabricated object (also known as a prefab) that is present within every scene. Figure 13 (below) shows the script process previously described in pseudocode

```
If currentScene is sceneX
  If previousScene is sceneY
    Spawn player at locationZ
  EndIf
EndIf
```

Figure 13: Pseudocode for Spawning Player Avatar

### ***Stone Vision***

Along with her snake hair, Medusa is also known for her gaze that would turn anyone to stone. Portraying this was actually rather difficult. In the Alphafest version of the game, this vision was simply a radius that made any guards around her disappear if they got too close. For the updated version, we wanted it to be a real cone of vision that turned the guards into statues. First we had to create an invisible cone in Unity to represent Medusa's cone of vision, then attach it to Medusa. Once the cone "collided" with a guard, the guard's animation would play that turned him to stone and he would stop moving.

The biggest issue with this, surprisingly, was getting the cone to face the proper direction that Medusa was facing. This actually required a decent amount of math in order to judge the rotation and still keep the tail of the cone centered on Medusa. Figure 14 below demonstrates some pseudocode representing the process by which that happens.

```
If Medusa is facing right
  check to see if the cone is rotated 90 degrees
  If NOT
    subtract current rotation from 90
    rotate cone by that amount
  Endif
Endif
```

Figure 14: Pseudocode for Stone Cone

### *Dialogue System*

Since we needed a medium through which to give the players story, we decided to create a dialogue system that would allow them to interact with their environment and with NPCs. The visual aspect of this was created through Unity's Canvas system, with a dialogue box created that has three components: a sprite associated with the character that is talking, the actual text of the dialogue, and a small portion of text at the bottom that reads 'Press Enter to continue'. Figure 15 shows an example of this dialogue box.

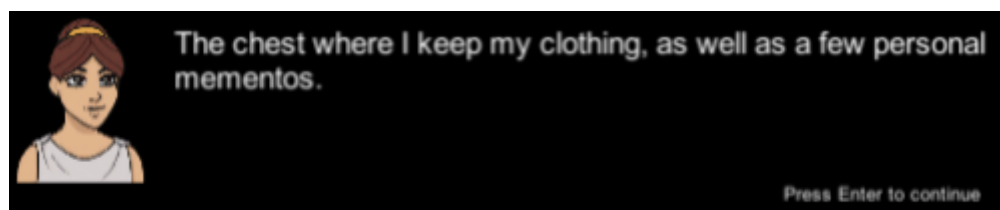


Figure 15: Dialogue Box Example

These boxes were then controlled by a dialogue manager script which, in conjunction with a dialogue holder script, set whether the dialogue box was active or not, updated the sprites

and text within each box, prevented the player from moving during dialogue, and allowed for the blocking of certain areas, such as exiting Medusa's house, until certain conditions had been met, such as reading the note from Priestess Agatha in the previous example. These boxes and their associated scripts were then associated with a Unity Canvas, which was then made into a prefab for easy addition to a scene. They were also used for dialogue in cutscenes, however the 'Press Enter to continue' was removed, as the dialogue advanced automatically.

### ***Enemy AI***

Since we needed enemies for both Perseus and Medusa, we need to create an AI for them. Initially, the enemies had no animations, and simply moved within a straight line towards the player. Once they collided with the player, the player died and the game reset. This method was sloppy and buggy, so we first decided to work on a better movement for the enemies. Unity has a built-in feature for 3D games where it can automatically create a navigation mesh, or NavMesh, that defines where the enemies can move. Unfortunately, our game was in 2D, so we weren't able

to use that feature without a little help.

We found a software called NavMeshPlus that was free to use with no necessary licensing that allowed us to use Unity's built-in NavMesh feature to create them for our enemies. Along with some specific lines of code, this allowed us to have the enemies move towards the player in a much more believable way. Figure 16

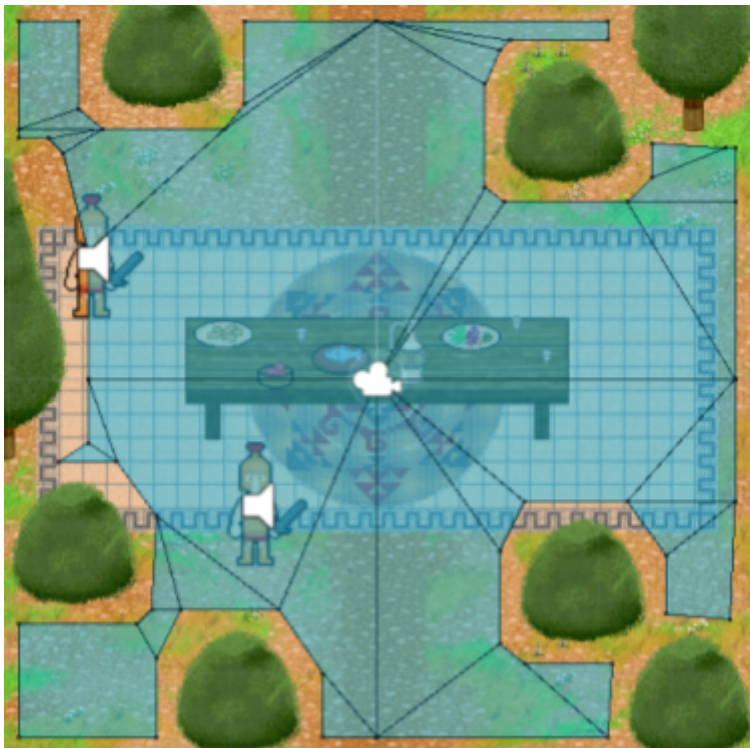


Figure 16: NavMesh Layout

to the left is a screenshot that shows an example of this NavMesh. Note the blue area, which signifies where the enemy can move. In instances where it is smaller than the enemy, it does not pass through there.

Next was combat, and we needed our enemies to be able to attack. Similarly to how Medusa's cone of vision worked, we created an attack box for the enemies. This box worked like the cone of vision in that it was an invisible shape that, when it collided with the player, caused them to play an animation and "die". The main difference between the two, however, is that the attack box cannot always be active. This was fixed by simply having the script check to see if the enemy was attacking, which would then cause the attack box to activate, then deactivate once the attack animation had finished.



## **Study of the Effects Playing Medusa had on Empathy, Rape Myth Acceptance Levels and Hostile Sexism**

The purpose of this study was to determine whether a game designed to spread awareness on the detrimental effects of sexual violence could affect the level of empathy felt towards characters in the game and the level of rape myth acceptance. We hypothesized that the players who played the full game - and thus have seen the story from both the perspective of the victim and the victor - would have (1) higher levels of empathy towards Medusa, (2) lower rape myth acceptance levels, and (3) lower hostile sexism levels than players who played half the game through only one character.

### **Method**

#### ***Participants***

Participants in this study were recruited from various means such as through a private institution's psychology study hub, Amazon's Mechanical Turk, and by email invitation. All participants took part in the study voluntarily and willingly gave their consent. In total, 73 participants took part in the study. Of the participants, 18 identified as male, 25 identified as female, two identified as non-binary, one identified as other and one chose to not report their gender identification. Ages of the participants ranged from 18 to 60 years old. Of the total participants, 27 responses were removed from data analysis: 22 did not finish the study, three did not provide consent and were not allowed to continue the study, one did not pass the manipulation check (suggesting they did not play the game), and the last removed response was a significant outlier (this individual was outside of the third quartile of the data) on multiple scales of the study .

## Materials

**Game Play Conditions.** We wanted to examine whether playing through a flashback to Medusa’s life before she was cursed would influence participants’ level of empathy towards Medusa and their level of rape myth acceptance. Therefore, half of the participants were randomly assigned to play the full version of the game that had the flashback and half were randomly assigned to play a shortened version of the game that did not have the flashback.

**Shortened Version (Perseus-Only).** The executable containing the shortened version of the game has players go through the game as Perseus, not providing them the opportunity to play as Medusa through her storyline. The main points of this game version can be seen in Figure 17 to the right.

This version of the game represented a typical role-playing game in which the hero has to go and slay other beings for the sake of accomplishing a task. In this version, players never experienced the story of Medusa through her eyes, only through the account of Perseus.

**Full Game.** The executable containing the full version of the game has players go through the game as Perseus and as Medusa. This allows the participants



Figure 17: Major Components of Shortened Version

to experience the story of Medusa through her perspective. The main points of this game version



Figure 18: Major Components of the Full Game *Medusa*

can be seen in Figure 18.

This version of the game was meant to garner more empathy for Medusa, allowing players to witness her story through her eyes *after* having already killed her and having been given one side of the story. The purpose of the newspaper ending was to tie the themes of our story back into the real world, connecting to story of Medusa to modern-day sexual assault cases.

### *Measures*

**Manipulation Checks.** Each video game version had its own manipulation check which asked what the last event in the video game was. This manipulation check was presented with the answer format of a 4-choice multiple choice question. As the two game versions had different endings (the full game ending after the player plays as Medusa while the shortened version ending after the player plays as

Perseus), the answer choices for the questions were different but the format of the questions were the same. Each had three incorrect choices that were obvious to participants who played the game (e.g., “Medusa went skydiving”). There were answer options which referred to Medusa but

were not accurate to the story such as the example mentioned. These were put in place to ensure that the context clues of the study (such as the name of the game file) did not make the correct answer too obvious to any individual who had not participated in the video game. These questions were implemented to act as confirmation that the participant did play the game, as not completing or paying attention to the game, would affect their data in such a way that it would not be representative of an active play session.

**Video Game Feedback Questionnaire.** Immediately after completing the game, all participants completed a survey regarding the fundamental design of the video game. There were two versions of the feedback form: the original, and a shortened version modified to follow the shortened version of the game. The full version had 17 questions:

- 12 questions on a 7-point Likert scale assessing how entertaining the game was, how easy to understand the story was, and what it was like to play as Perseus (e.g., “How engaging was your experience playing this video game?”).
- 4 open-ended questions ascertaining the players’ understanding and critique of the video game (e.g., “Please explain the game’s story in your own words.”).
- 1 multiple choice question asking if the players had been exposed to any previous version of the game (e.g., “Have you been exposed to any previous drafts of this video game including Alphafest testing or the paper prototype edition?”).

These questions were asked to allow the team to gather feedback and critique concerning which contents of the game were efficient and which needed more improvement. The final question was asked so that during analysis, the researchers would be able to know if a participant has already

been exposed to the themes and purpose of this video game, something that has the possibility of strongly influencing the participant's opinions of the game as well as how the game has affected them (if at all).

The shortened version of the game survey consisted of only 9 questions, broken down as follows:

- 4 questions on a 7-point Likert scale assessing how entertaining the game was, how easy to understand the story was, and what it was like to play as Perseus (e.g., "How engaging was your experience playing this video game?").
- 4 open-ended questions ascertaining the players' understanding and critique of the video game (e.g., "Please explain the game's story in your own words.").
- 1 multiple choice question asking if the players had been exposed to any previous version of the game (e.g., "Have you been exposed to any previous drafts of this video game including Alphafest testing or the paper prototype edition?").

The reduced number of Likert-scale questions was due to this version of the game not featuring Medusa as a playable character, so any questions about the experience of playing as her were removed so as to not reveal the control and experimental group factors to the participant. The rest of the questions still allowed researchers to gather the same basic information about the game without sharing that Medusa was playable in one version but not the other. All of the feedback questions used can be found in Appendix C.

**Empathy Towards Characters Within The Video Game.** After completing the video game feedback form, participants completed Batson's Empathy Scale. This scale was modified to

measure empathy experienced towards Perseus, and empathy towards Medusa. The scale included 6 items on a 7-point Likert scale (1 = Not at all; 7 = Extremely). The items were related to the 6 empathetic emotions that reflect empathy, including “sympathetic”, “moved”, “compassionate”, “tender”, “warm”, and “softhearted” (Batson et al., 1987). The 6 items were made to be specific to either Perseus or Medusa (i.e., “How sympathetic do you feel towards Medusa?”). Items were averaged together with higher numbers indicating greater empathy felt towards a specific character.

**Player Identification With Characters.** After participants filled out the Batson’s Empathy Scale referring to a specific character, they were shown and asked to complete a character-specific version of the Player Identification (PI) Scale (Van Looy et al., 2012). This was done for each character (Medusa and Perseus) in order to measure the levels in which the participants identified with each of the characters they have played as. The scale included 17 5-point Likert items ranging from strongly disagree to strongly agree. The items corresponded with 3 different subscales: Game Identification (GI), Embodied Presence (EP), and Wishful Identification (WI). All seventeen items related to the subscales of embodied presence as well as wishful identification, such as “When I am playing, it feels as if I am Perseus” and “When I am playing, it feels as if I am Medusa”. Ten of the seventeen items also related to game identification, such as “In the game, it is as if I become one with Perseus” and “In the game it is as if I become one with Medusa”. There were 10 items removed from the original scale in our study due to irrelevance. These items are related to group identification within massively multiplayer online video games such as World of Warcraft. These items asked questions such as “The members of my guild are important to me” and “I regularly go online to meet with others

from my guild”. Items were reverse scored as needed. Items were then averaged together with higher numbers indicating greater empathy felt towards a specific character.

**Individual Differences in Empathy & Perspective Taking.** Research shows that some people are more inclined to have empathetic concern or to perspective-take than others (Davis, 1983). Therefore, after completing the PI Scale, participants completed the empathetic concern and perspective taking subscales from the Interpersonal Reactivity Index (IRI; Davis, 1983). The items were on a 7-point Likert-type scale (1 = Does not describe me well; 7 = Describes me very well). Seven items were related to empathetic concerns, such as “I often have tender, concerned feelings for people less fortunate than me”. Another seven items were related to perspective taking, such as “Before criticizing somebody, I try to imagine how I would feel if I were in their place”. Items were reverse scored as needed. Items related to empathetic concern were averaged together with higher numbers indicating more empathetic concern. Items related to perspective taking were averaged together with higher numbers indicating a greater inclination to take another person’s perspective. We also conducted a median split to determine participants who were high in empathetic concern and perspective taking and those who were low in these characteristics. This allowed us to analyze whether individuals who were high or low in empathetic concern and/or perspective taking experienced the game differently.

**Rape Myth Acceptance Scale.** After completing the IRI, participants are then led to believe that we were interested in attitudes towards larger societal issues. Participants then completed the Rape Myth Acceptance Scale (RMA; Fox & Potocki, 2016) which is a survey examining perceptions of rape using 14 Likert scale questions with a response scale ranging 1 - 7 (1 being strongly disagree and 7 being strongly agree). The participant responded by rating how

much they agreed or disagreed with rape myths statements such as “The majority of rape claims are false.” and “Women who dress or behave in a sexually provocative manner are asking for it.”.

**Ambivalent Sexism Inventory.** After completing the RMA scale, participants completed the Ambivalent Sexism Inventory (ASI; Glick & Fiske, 1996). The 22 items were on a 7-point Likert-type scale (1 = Strongly Disagree; 7 = Strongly Agree). Eleven items were related to benevolent sexism, such as “Women should be cherished and protected by men”. Eleven items were related to hostile sexism, such as “Women seek to gain power by getting control over men”. Items were reverse scored as needed, and all items can be reviewed below in Appendix C. Items related to benevolent sexism were averaged together with higher numbers indicating higher levels of benevolent sexism. Items related to hostile sexism were averaged together with higher numbers indicating higher levels of hostile sexism. In addition, all items were averaged together to create an index of overall sexism. We also conducted a median split to determine participants who were high in benevolent and hostile sexism and those who were low in these characteristics. This allowed us to analyze whether individuals who were high or low in overall, benevolent and/or hostile sexism experienced the game differently.

**Demographics & Follow-Up Questions.** After answering all the questions regarding the game, characters, and societal issues, participants then provided demographic information. Six questions asked about their age (e.g., “What is your current age?”), student status (e.g., “Are you currently attending school as a student?” and if yes, “What is your current year?”), race identification (e.g., “Choose one or more race/ethnicity that you consider yourself to be.”), gender identification (e.g., “How do you currently identify?”), and political identification (e.g., “Here is a 7-point scale on which the political views that people might hold are arranged from extremely liberal (left) to extremely conservative (right). Where would you place yourself on this



scale?"). They were also asked if they or someone they knew has been a victim of sexual aggression (e.g., "Have you (or anyone you know) been a victim of sexual aggression?"). After filling this page out, the participant was sent to a debriefing document on the last page of the survey. Once this page had been submitted, the participant had fully completed the study.

### ***Procedures***

The participants started out by opening the link to the Qualtrics survey that held all of the study materials and then began the entirely online study (we did not interact with the participant in any way). The first page of the Qualtrics survey was the informed consent page. After giving informed consent, participants downloaded the video game file, with instructions on how to do so in case they were needed. This was where we manipulated which game participants played, as half the participants downloaded the shortened version of the game, and the other half downloaded the full version of the game. After completing the game, participants were directed to an online survey to provide feedback on their experience playing the game. Participants first provided general information on their perceptions of the game itself. Then participants completed assessments of their perceptions of Perseus and Medusa. In particular, we measured empathy felt towards each character using an empathy measure developed by Batson and colleagues (1987). We also measured identification towards the two main characters of the video game (PI scale; Van Looy et al., 2012). After completing their perceptions of the game, participants were led to believe we were interested in their attitudes towards different societal issues and completed a few scales that measured attitudes towards empathic concern, perspective taking (IRI; Davis, 1983), and rape myth acceptance (Fox & Potocki, 2016) along with ambivalent sexism (Glick & Fiske, 1996). Finally, participants provided demographic information including identified gender, age, and if they or anyone they know have been exposed

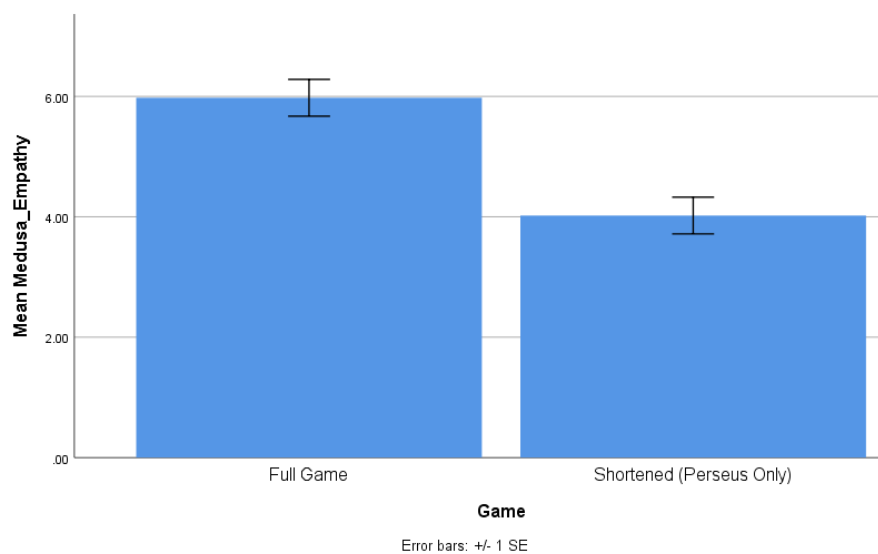
to any non consensual sexual activity. Participants were then thanked and debriefed as well as provided information to contact Worcester Polytechnic Institute's Student Development Counseling Center if they wanted to.

## Results and Discussion

We hypothesized that participants who played the full version of our game would have (1) higher empathy levels for Medusa, (2) lower rape myth acceptance levels, and (3) lower hostile sexism values. To examine these hypotheses we initially established, the team conducted one-way ANOVA tests between both the game version played and our dependent variables (empathy levels for Medusa, rape myth acceptance levels, and hostile sexism levels). The results are presented in 3 parts. The first section presents significant differences related to empathy felt towards Medusa, followed by significant differences related to participant rape myth acceptance levels, and lastly, significant differences related to participant hostile sexism levels.

### Empathy Levels for Medusa

The game version played statistically significantly influenced empathy towards Medusa, such that when participants played the full version including as Medusa ( $M = 5.97$ ;  $SD = 1.43$ ) they reported more empathy towards Medusa than those who played the shortened version just as Perseus ( $M = 4.02$ ;  $SD = 1.49$ ),  $F(1,44) = 20.43$ ,  $p < 0.001$ ,  $\eta^2_p = 0.32$ , two-tailed test (see Figure 19). This supports our original hypothesis that participants who played the full game would have higher levels of empathy for Medusa than participants who played the shortened (Perseus-only) version. This suggests that participants who were presented the opportunity to take Medusa's perspective and play through her story as the main character of said story were able to empathize with Medusa more so than players who were not given that opportunity (depicted in Figure 19 below). This aligns with previously discussed research which focuses on empathy and player identification between them and their avatar. Further research performed on understanding and utilizing this connection may allow for technology which provides the user with an opportunity to learn from and experience significant events through interactive media.

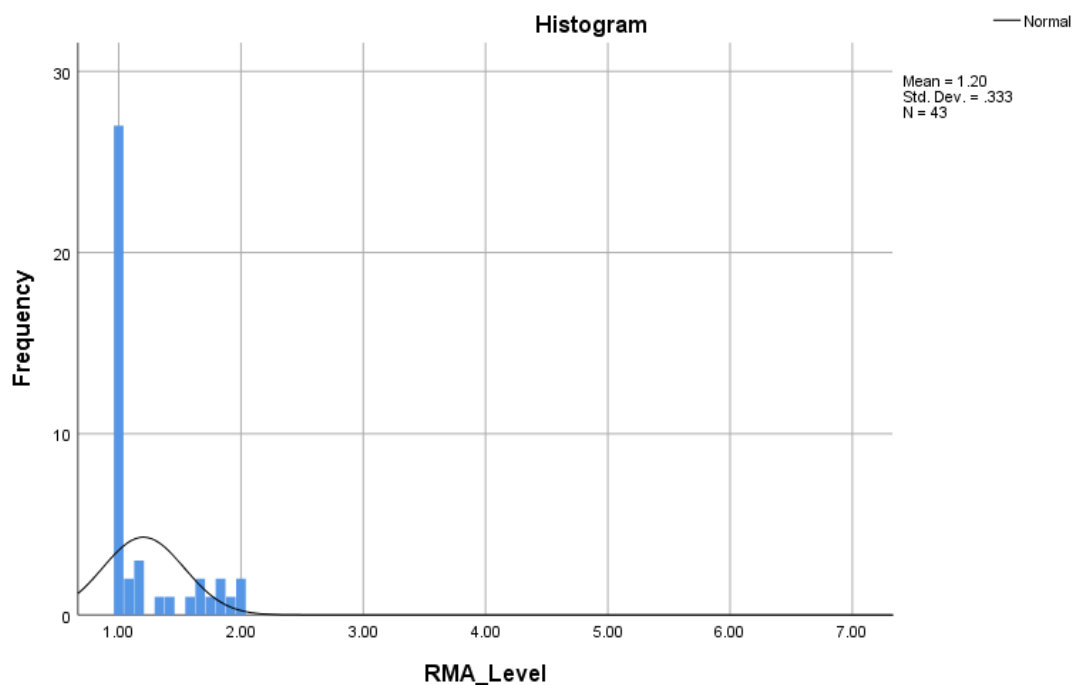


**Figure 19: Significant Difference Between Game Version Played and Empathy for Medusa**

### Rape Myth Acceptance Levels

Contrary to our hypothesis, the game version played was not found to have statistically significantly influenced the participants' rape myth acceptance levels  $F(1,41)= 0.49, p = 0.49, \eta^2_p = 0.01$ , two-tailed test. Participants who played the full game did not show signs of decreased rape myth acceptance levels compared to those who played the shortened game. This may have been due to factors of the study and the game design. One factor that was considered was the addition and implementation of the ending video within the video game. It should be noted that there was not a high range of variation in the participant's rape myth acceptance levels (the lowest score being 1.00 and the highest score being 2.00 on a scale of 1 to 7) as seen in Figure 20 below. The design and message portrayed by the ending video may have provided an element of social acceptability bias (participants may have felt social pressure to report answers they felt better aligned with what they should report rather than providing how they truly feel) within our results. This is hypothesized due to the video portraying rape as damaging and immoral, which may have persuaded individuals participating in the study to provide answers to the rape myth

acceptance scale which align more with the video than their own beliefs. Perhaps another study performed with more intentional neutrality would have provided a higher variety of answers, and therefore different results.

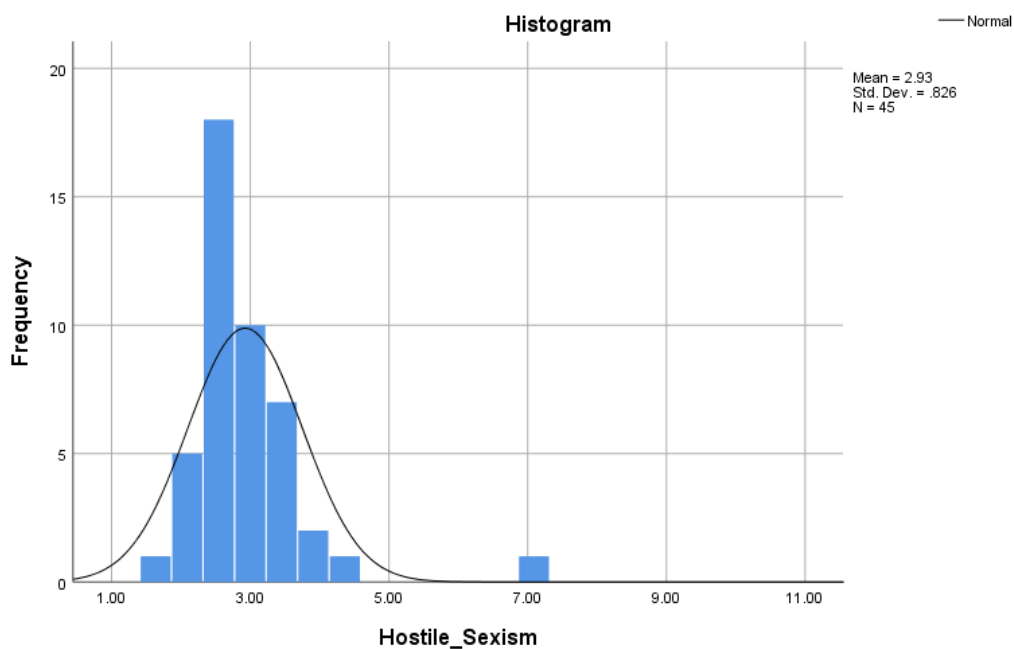


**Figure 20: Histogram of Rape Myth Acceptance Levels**

### **Hostile Sexism Levels.**

The game version played was not found to have influenced the participants' hostile sexism levels in a statistically significant way  $F(1,43)= 1.67, p = 0.20, N^2_p= 0.037$ , two-tailed test. This finding did not support our initial hypothesis that participants who played the full version of *Medusa* would have lower levels of hostile sexism than those who played the shortened version. Similar to the range of responses found in the rape myth acceptance levels, the responses to the hostile sexism subscale of the ambivalent sexism scale were also not found to have a large variance as can be seen in Figure 21 below (minimum potential response 1, maximum potential response 11). Due to the main topic of the study focusing on sexual assault

of a woman and awareness of rape culture, there may also have been an element of social acceptability bias within these results. With this being said, there is a slightly larger variety of responses with the maximum response being a 7 (although this response is noted to be an outlier). The team believes the difference between the variance in responses to the hostile sexism scale and the rape myth acceptance scale may be in relation to the direct message of the video game and ending video focusing on rape. This focus on rape may have caused a stronger social acceptability bias concerning the rape myth acceptance reportings than it did in relation to the hostile sexism reportings.



**Figure 21: Histogram of Hostile Sexism Levels**

## **General Discussion**

The purpose of our project was to create a video game which raised awareness of the effects of sexual assault upon victims by invoking empathy towards the main character and reducing rape myth acceptance levels through the narrative. We predicted that participants who played through Medusa's story would have higher levels of empathy towards her as well as have lower levels of rape myth acceptance and hostile sexism. We hypothesized this would happen due to our predictions of empathizing with a victim of sexual assault and witnessing the distress it caused upon the victim.

The results of our study confirm one of our three hypotheses. In line with our first hypothesis, participants who played the full version of the game showed higher levels of empathy for Medusa. This aligns with past work that has been done focusing upon empathy and perspective-taking between players and their avatars within video games (Kaatz et al, 2017). Through projective identity as they were put into the shoes of Medusa, and by learning about her story, players were able to have a deeper understanding of her as a person.

However, the data did not support our other hypotheses. There were no significant differences in rape myth acceptance nor hostile sexism levels in those who played the full game and the shortened version of the game.

### **Final Game Build**

The main goal for the prototype utilized in testing was to have a functional game that embodied the core of our idea: eliciting emotion from the player in Medusa's favor. In order to have sufficient time for testing, we utilized an unpolished version of our game. Although we did not use a final polished game for our testing, we did ensure that the core elements of our game were implemented: gameplay, story, and meaningful audio. Once that was done, we used the

build for testing and continued to work on a copy of it to have a polished game for one of our project deliverables. While these updates were not reflected within the build utilized in our study, they were implemented in the final build of the game submitted for Showfest (an event held by Worcester Polytechnic Institute's Interactive Media and Game Design Program in which students share their Major Qualifying Project).

The first set of changes we made revolved around fixing bugs that impacted the gameplay experience, through some form or another. An example is that in the game, you play as Medusa to collect offerings to take to the temple of Athena. If you try to leave the area before having collected all the offerings, you get a dialogue box pop-up of Medusa reminding herself that she should get all the offerings. When this box popped-up, however, the speech portrait would not be of Medusa, but rather of the last person you talked to. In the final version, this has been fixed. Another issue involved the guard artificial intelligence (AI). When Medusa turned the guards to stone, there was a chance that they would still be able to attack, albeit while not playing the attack animation. This led to several confused players wondering why the guards could still kill them after being turned to stone. The final of these issues was in the Perseus section of the game. When rapidly pressing the button to have Perseus attack, players noticed they could press it repeatedly and the sound would play for each button press, but the animation would not play since they were hitting it so rapidly. By introducing an attack cooldown, this issue was fixed, with minimal negative impact on gameplay.

The second set of changes revolved around the player experience. Players - including our own advisor - told us they wanted to be able to look at things in Medusa's house. Since part of the game requires them to read a note left by Priestess Agatha, the logical inference was that they could inspect other elements. To this end, several comments have been added when Medusa now



examines the washbasin, chamber pot, bed, and trunk in her house. Similarly, some players expressed confusion that they, as Perseus, could not go to Medusa's house. There was no indicator that it was off limits, as the road was open and no dialogue appeared. The player was just simply not allowed to go that way. This has been fixed in the final version of the game, where bushes now block the path, signifying the passage of time and the lack of traffic. Lastly, the audio mixing in the game was rough, to say the least. Since our audio was taken from several sources, this meant that they all had varying volumes. This caused annoyance among the players, as the auditory whiplash from one sound to the next made it difficult to allow the audio to immerse them within the game. For the final build, these levels were smoothed and evened out to create a better auditory experience. Though we have made these updates with the final build of our game that was not included in our study, there were still some drawbacks to our project that will be discussed in the next section.

## **Limitations**

Now, we will go into a discussion of our limitations pertaining to the project, including the study and the game itself. These limitations will branch out from general obstacles to ones more specific to each discipline (being psychology, philosophy, and game design).

### ***General***

**Scope of Research.** The multidisciplinary approach to our project meant there was far more research required than we initially expected. The many interconnected subjects continuously revealed to us additional angles of perspective that we did not fully research until we were further into our project's development, causing dissonance in our game's messages. An example that we will touch more upon later is that we chose animals to be enemies for Perseus to defeat. We did this without realizing that our game lacked clear acknowledgment of the

patriarchal theme of mindless animal abuse and slaughter. Without this clear acknowledgment, we were instead promoting and enforcing the slaughter of animals in video games.

### *Psychology*

**Game Length.** Pertaining to the goals of our study, our game has a relatively short playtime, only about ten minutes at minimum. This short time could have limited the ability of the player to become familiar and empathize with the character they played as. The short time also limited the depth and detail that the story presented. Expanding the story to allow more character interactions and increase exposure to the characters would naturally increase the length of the game. Of course, simply spending more time with the characters alone might not be enough to increase empathy with them. The expanded story must also be carefully written and designed to have meaningful interactions and offer insights into the characters' thoughts and actions.

**Player Engagement.** Another limitation in relation to the psychology aspect is the amount of time the participant spent interacting with the game. It is entirely possible that the length of engagement had a relationship with the participant's engagement with the game. A longer game with a story given in greater detail may affect participants' rape myth acceptance and hostile sexism levels.

### *Philosophy*

**Animal Slaughtering.** As briefly touched upon, the utilization of animals within the game is enforcing and encouraging the patriarchal theme of mindless animal abuse and slaughter. This, along with more specific instances such as the Harpy usage (representative of the monstrous feminine) within the game contradicts the themes our game was attempting to portray. This is further expanded upon in the future work section below. It is an important lesson to keep

in mind that we should be aware of every message we may be sending to the player, whether intentionally or not, so that we do not end up invalidating the themes we claim to be supporting.

**Overoptimism in Goals.** *Medusa* is only a single game in the sea of others that tends to enforce the very ideologies we've been trying to combat. Perhaps it was an oversight on our part to believe that playing a game could result in the changes to deeply ingrained attitudes pertaining to rape culture, sexism, and misogyny that we were looking for.

### ***Game Design***

**Missed Messages.** A limitation to the game design is the possibility that design features within the game were missed or not entirely understood by the participant as the game did not directly bring it out to the player's attention. For example, participants may not have been aware of the portrayal of gender roles within the game by Medusa running around doing errands while the male NPCs were enjoying the festival. Making instances like these more obvious could have further assisted in getting our messages across.

## **Conclusion**

### **Summary of Our Project**

We created a 2D pixel RPG called *Medusa* to raise awareness and active consideration of rape culture and to study the game's effects on players' empathy for Medusa and their hostile sexism and rape myth acceptance levels. Our research balanced the multiple disciplines of psychology, philosophy, and interactive media to influence our game design, taking care in considering the sensitivity of the topics of rape culture and trauma that we wanted to present. In the game, players first play as Perseus on a heroic quest to slay Medusa, and then they play as Medusa before she becomes cursed in order to learn about her background. The end of the game

leaves players with a screen of real news articles about sexual assault in order to show the prevalence of rape culture in our society.

Our study of our game randomly assigned participants to play one of two versions. One only offered Perseus's gameplay and story, the other had both Perseus and Medusa's stories. After playing the game, participants answered questions that measured empathy felt towards Perseus and Medusa, hostile sexism levels, and rape myth acceptance levels. Our results of the study supported our hypothesis that playing the full game increased empathy towards Medusa, but there were no significant differences between hostile sexism and rape myth acceptance levels.

### **What Went Wrong**

Every project has its flaws, and ours was no different. While we believe *Medusa* is a good representation of our vision, there are some things that went wrong during development and that given our knowledge now, we would have done differently.

To start, design issues at the beginning of development had to be addressed further down the line. Lack of art research in the alpha build of our game led to the creation of multiple art assets in order to keep an art style consistent with the time and place we were trying to emulate. Another design decision that needed to be made far earlier was that of the programming structure. In the game's current state, each area of gameplay reloads from scratch when the player enters, removing any impact they'd had on the area. For example, any guards that are statues when the player leaves the area will turn back into guards when the player re-enters the area. Resolving this issue requires changing the foundational code of the game, resulting in essentially rebuilding the entire game. If this was addressed earlier in development, this bug could have been addressed without requiring too much reconstruction of the game.

Another important consideration when discussing what went wrong is that not all of our hypotheses were supported by our data. Two of our three hypotheses were not supported and this may actually be tied to how we designed the game and study. As we've stated, our study focused on measuring empathy, rape myth acceptance, and hostile sexism. Only our hypothesis on empathy was supported by the data, as the data for the other two showed no statistically significant change. This could be for a couple reasons. First, our game was rather short, only around 10 minutes long. As a result, this may not have been enough time to properly affect such deeply ingrained aspects of our players. If we could do this differently, we may have tried to make a longer game with a more expanded story in order to influence our players further. Another potential flaw in our study design was one of the aspects we're proudest of: the ending video. By having the participants watch a video that clearly portrayed rape and sexual assault in a negative light, they may have been influenced by social acceptability bias, and therefore may have answered the survey about their rape myth acceptance and hostile sexism in a way that seemed more socially acceptable than how they actually felt. If we could redesign the study, we would have either decided to randomize the ending in a similar way to how we randomized the game version (the team then would have analyzed data regarding the presence of the video), or simply remove the video ending from testing altogether.

### **What Went Right**

*Medusa* as a whole accomplished what we set out to do in this MQP. We successfully created a full top-down role-playing game that told an emotional story based around the story of Medusa. The story came across clearly to the players, as they sometimes understood what was going to happen before the story even got to that point. During playtesting several players commented on moments within the game with emotion, completely unprompted. The simplistic

art style and minimal scoring allowed our players to truly focus on the story and the emotions it presented.

Our game ending, while technically born out of a necessity to tie the themes of our game back to the real-world, is something the team is particularly proud of. We combined audio and visuals in such a way as to create the most emotional impact. The symbolism in the pacing of the article appearances, combined with the narration and the background music created such an emotional ending that it is nearly impossible to not understand how our game ties into the real world.

While our initial artwork for the game was rough, the feedback we got from our advisors was invaluable in polishing it and putting together a cohesive art style. Our environmental art style underwent the most change. Originally our environment looked like a very generic fantasy RPG style. With direction from our advisors, we looked at more instances of Greek landscapes and Ancient Greek architecture and design, working those new influences into our design to create a world that felt much more like Ancient Greece.

We also successfully put together a study that garnered significant results. While our data did not support two of our hypotheses, it did seem to support our main one: that playing the full version of *Medusa* would increase empathy towards the character of Medusa more so than playing only the shortened version. This helps to pave the way for additional research into how empathy can be manipulated for future MQPs interested in combining the fields of psychology, philosophy and game design.

### **Future work**

Future work in relation to this project could include having players play a first-person game or a game with more realistic graphics. A game in which the player is placed in the

first-person view and is exposed to realistic settings and game characters may provide a more realistic and impactful experience. This idea could be taken even further by creating a virtual reality game, further immersing the player in the game world. These changes could provide a difference in the participant's perspective-taking, therefore altering their levels of empathy and impact of the game upon the player.

Other future work could include a more in-depth game that allows for more player autonomy. Throughout our game playtesting, there were many comments suggesting the allowance of players to make decisions within the game. The initial design of this game had included dialogue trees in which the player had the option to react to non-player characters in the way they choose within the game. This would provide perceived player autonomy as well the option of allowing the player to learn more about the game world as they wanted. The dialogue trees along with the reasoning behind the dialogue design choices can be seen below in Appendix D. Unfortunately, the team did not have time to implement these features. However, allowing the player to affect the game (or providing the illusion thereof) may cause them to take it more seriously and feel more impacted and immersed within the game world. This deeper engagement may allow the emotional impact of the game to affect the player on a deeper and more serious level, causing a stronger effect on the player.

Along with allowing more choice and interactivity for the player, future work could also address thematic inconsistencies within the game. One such inconsistency is the forced slaughter of animals within the game. As previously mentioned, this game mechanic follows a classic patriarchal-based game design which degrades other living creatures to nothing more than items to be used in order to support the character's male ego. Creating other activities, or drawing light and reflection to this activity within the game has potential to strengthen both the awareness of

patriarchal culture and the themes of empathy and perspective-taking. It may also be worth considering utilizing the Perseus and Medusa gameplay symbolism by reflecting how this slaughter of animals is unethical within the Medusa gameplay portion. This may provide the player the chance to engage in this activity and be faced with the consequences and forced realization. This may provide a greater learning experience with a more profound and longer-lasting effect than simply removing the animals from the Perseus gameplay. Enacting either of these changes may even have the potential to change how impactful the game is upon players.

As a whole, we hope that future projects can build upon the base we have created to further examine how video games can be utilized, not only as a research tool to garner empathy, but also how they are able to create real change in society.



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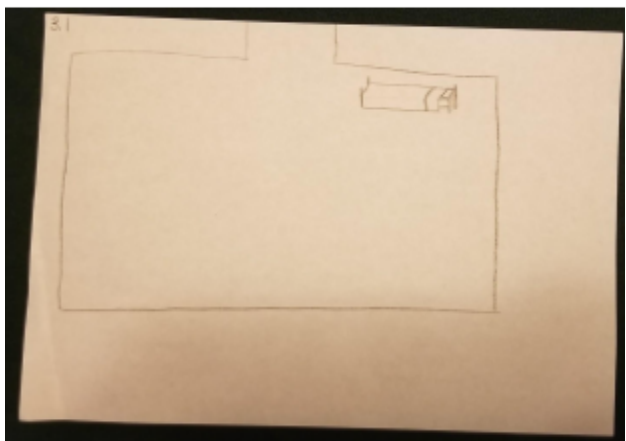
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**Appendix A**  
**Paper Game Versions**

**Version 1 - Initial Sketches**



First Sketch of Medusa's Room



First Sketch of Medusa's Home (the Priestess' House) and Neighbors



First Sketch of Medusa's Town



First Sketch of Shopping Center and Docks



First Sketch of Inside the Temple

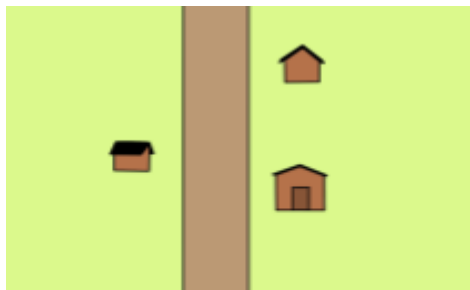


Initial Sketch of Medusa's Island in Prototyping Phase

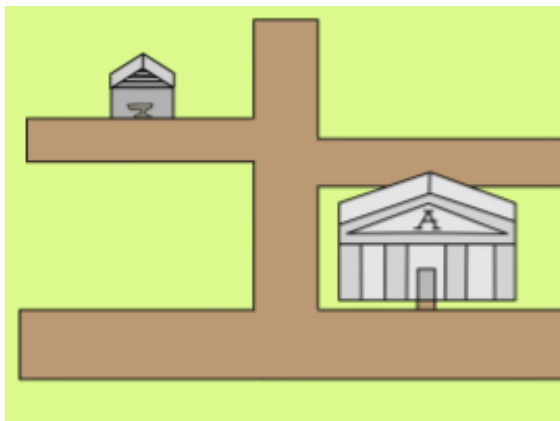


First Sketch of Medusa's Island while Prototyping

Version 2 - Paper Prototype



Medusa's Home and Neighbors



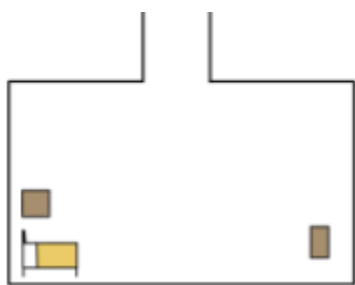
Town Center with the Temple on the bottom right



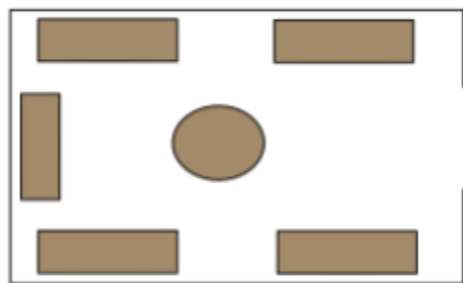
Shopping Center and Docks



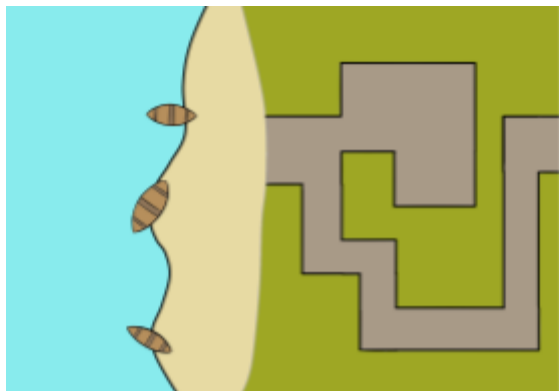
Inside of the Temple



Medusa's Room



Festival Center



Medusa's Island



Medusa's Cave

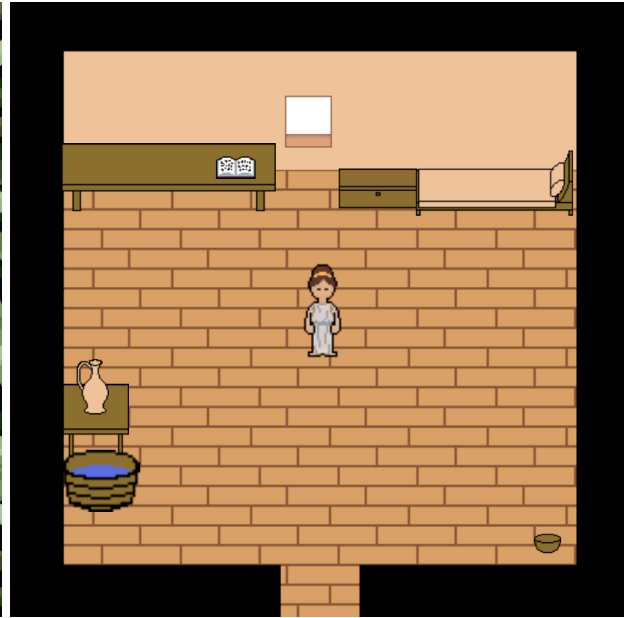
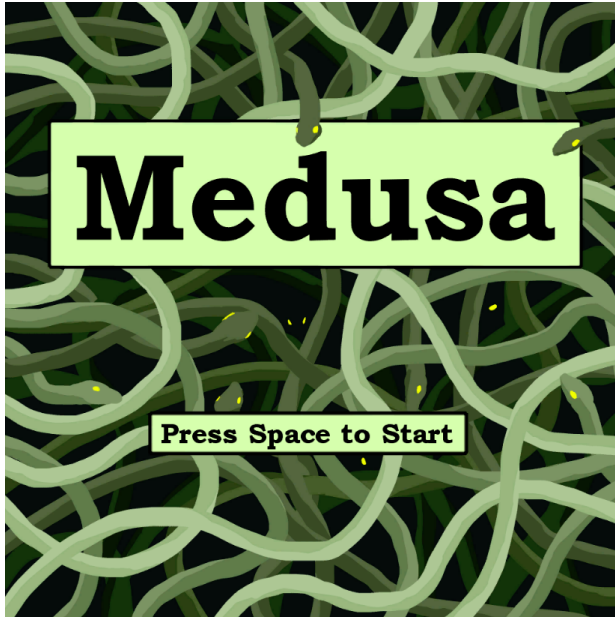


Characters and Props

Appendix B

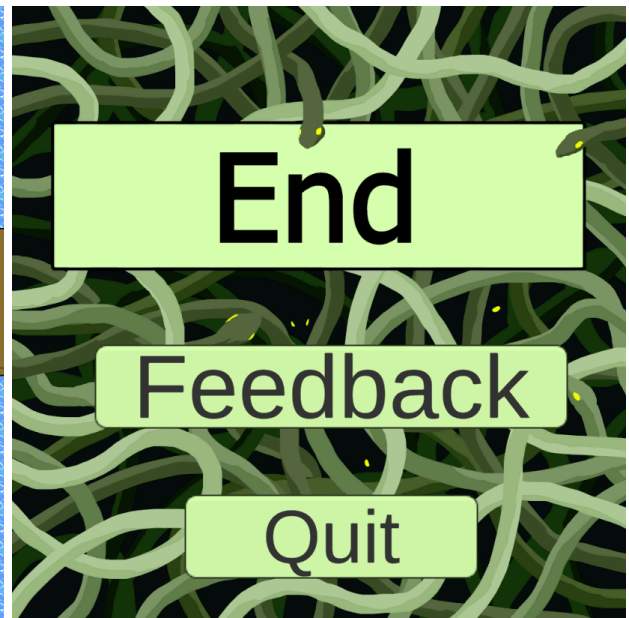
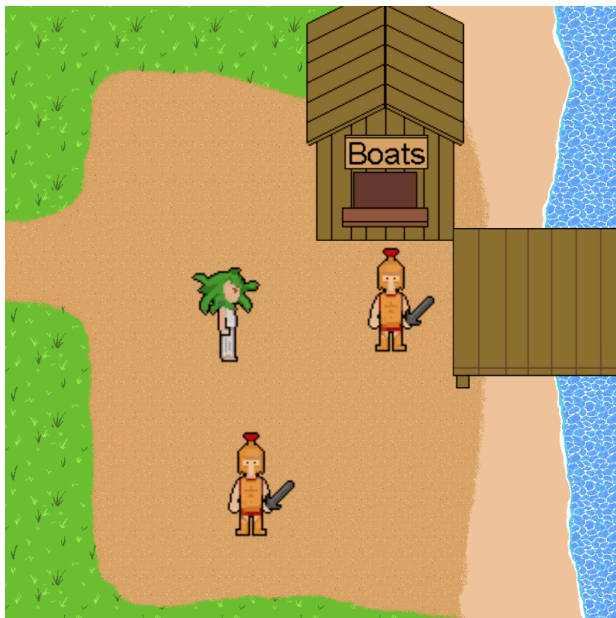
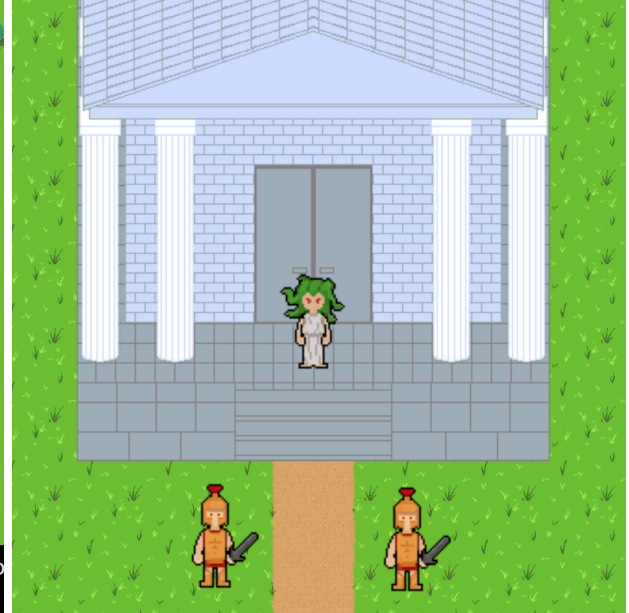
Electronic Game Versions

Version 3 - Alphafest



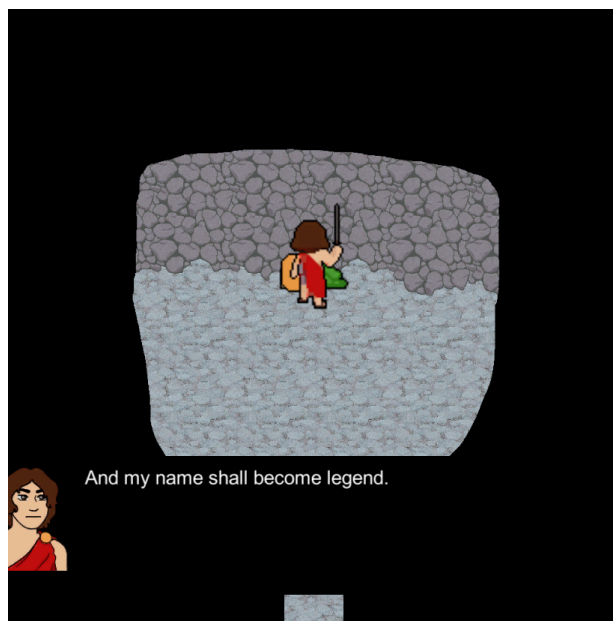
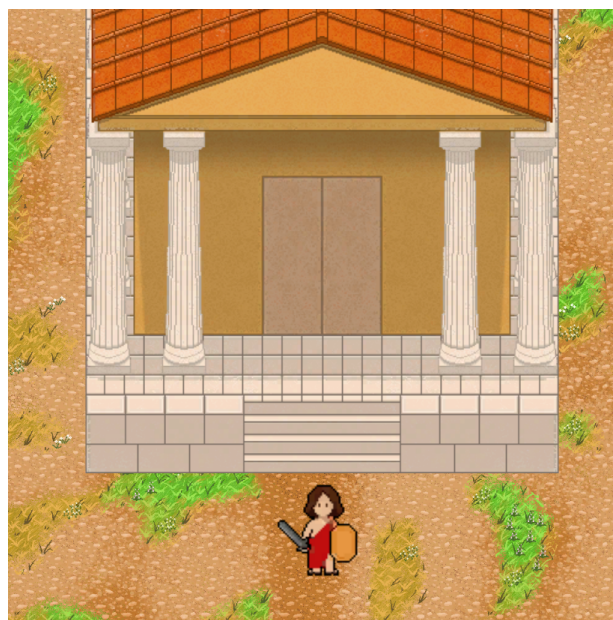


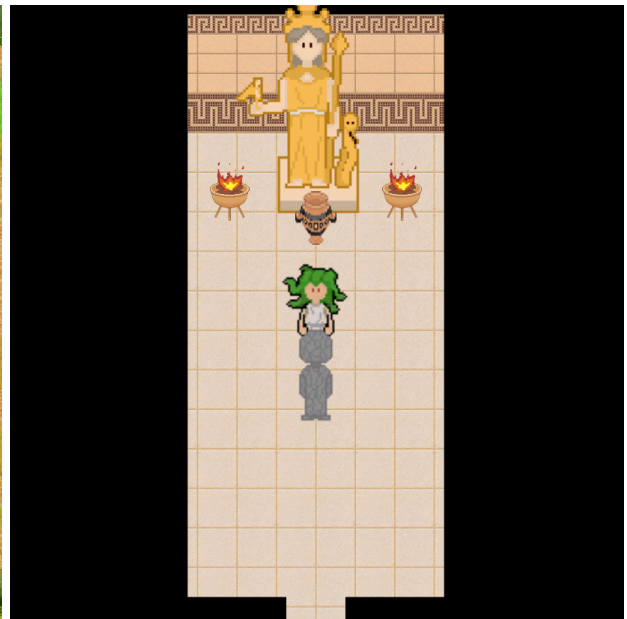
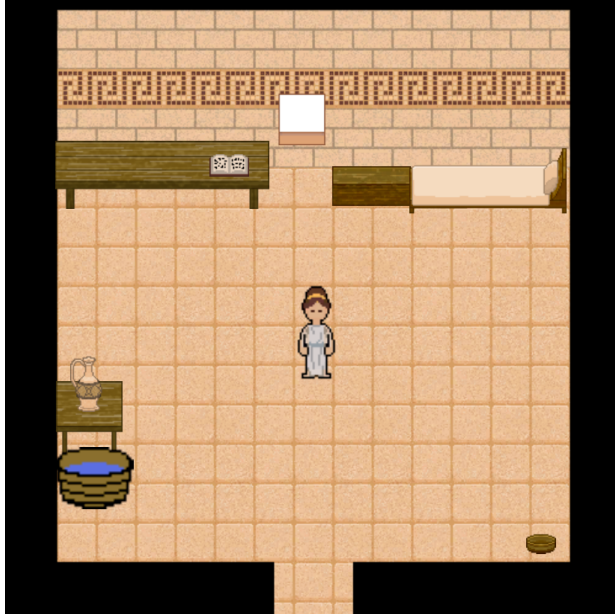
This is a celebration of Artemis and Athena. What is a priestess of Aphrodite doing here?



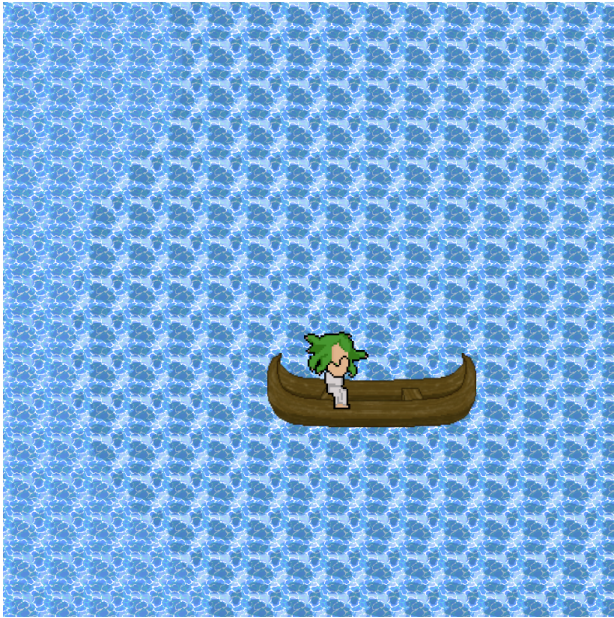


Version 4 - Prototype for Testing









Link to game ending video: <https://youtu.be/LqG8aLNSS-k>

## Appendix C

### Study Items

#### Game Feedback Form (Full)

(On a 7-point scale from 1, Not at all to 7, Very)

1. How engaging was your experience playing this video game?
2. How engaging was it playing as Perseus?
3. How engaging was it playing Medusa before she was cursed?
4. How engaging was it playing Medusa after the Curse?
5. What impression did the people donating offerings leave upon you?
6. Please explain the game's story in your own words below (OPEN-ENDED)
7. How well did you follow the story as the game unfolded?
8. How understandable did you find it was to switch between Perseus and Medusa?
9. How much control did you feel you had over Perseus?
10. How much control did you feel you had over Medusa when she was a priestess (AKA before she was cursed)
11. How much control did you feel you had over Medusa after she was cursed?
12. How understandable did you find it was to switch from pre-curse Medusa to Post-Curse Medusa?
13. How well did you understand your ability to turn the guards to stone as post-curse Medusa?

Open-ended

14. Were there any aspects of this game that were confusing, out of place, or seemed unnecessary while you played the game? If so, please explain below
15. Do you have any thoughts or suggestions for ways in which to improve the user experience while playing the game? If so, please explain below
16. Do you have any other thoughts or concerns about the game based on the iteration you played? If so, please explain below

Multiple Choice (Yes, No, Other)

17. Have you been exposed to any previous drafts of this video game including Alphafest testing or the paper prototype edition?

### **Game Feedback Form (Shortened Version)**

(On a 7-point scale from 1, Not at all to 7, Very)

1. How engaging was your experience playing this video game?
2. How engaging was it playing as Perseus?
3. Please explain the game's story in your own words below (OPEN-ENDED)
4. How well did you follow the story as the game unfolded?
5. How much control did you feel you had over Perseus?

Open-ended

6. Were there any aspects of this game that were confusing, out of place, or seemed unnecessary while you played the game? If so, please explain below

7. Do you have any thoughts or suggestions for ways in which to improve the user experience while playing the game? If so, please explain below
8. Do you have any other thoughts or concerns about the game based on the iteration you played? If so, please explain below

Multiple Choice (Yes, No, Other)

9. Have you been exposed to any previous drafts of this video game including Alphafest testing or the paper prototype edition?

**Batson's Empathy Scale**Perseus

On a 7-point scale (1 = not at all; 7 = extremely)

1. How sympathetic do you feel towards Perseus?
2. How moved do you feel by Perseus?
3. How compassionate do you feel towards Perseus?
4. How tender do you feel towards Perseus?
5. How warm do you feel towards Perseus?
6. How softhearted do you feel towards Perseus?

Medusa

On a 7-point scale (1 = not at all; 7 = extremely)

1. How sympathetic do you feel towards Medusa?
2. How moved do you feel by Medusa?
3. How compassionate do you feel towards Medusa?
4. How tender do you feel towards Medusa?
5. How warm do you feel towards Medusa?
6. How softhearted do you feel towards Medusa?

## Player Identification Scale

### Perseus

On a 7-point scale (1 = strongly disagree; 7 = strongly agree)

1. Perseus is similar to me (EP, WI)
2. I resemble Perseus (GI, EP, WI)
3. Perseus resembles me (GI, EP, WI)
4. I identify with Perseus (GI, EP, WI)
5. Perseus is like me in many ways (EP, WI)
6. Perseus is an extension of myself (GI, EP, WI)
7. In the game, it is as if I become one with Perseus (GI, EP, WI)
8. I feel like I am inside Perseus when playing (EP, WI)
9. When I am playing, it feels as if I am Perseus (EP, WI)
10. When I am playing, it feels as if I am transported into Perseus (EP, WI)
11. When playing, it feels as if Perseus's body becomes my own (EP, WI)
12. In the game, it is as if I act directly through Perseus (GI, EP, WI)
13. I would like to be more like Perseus (GI, EP, WI)
14. If I could become like Perseus, I would (EP, WI)
15. Perseus is an example to me (GI, EP, WI)
16. Perseus is a better me (GI, EP, WI)
17. Perseus has characteristics that I would like to have (GI, EP, WI)

GI = Game Identification      EP = Embodied Presence      WI = Wishful Identification

## Medusa

On a 7-point scale (1 = strongly disagree; 7 = strongly agree)

1. Medusa is similar to me (EP, WI)
2. I resemble Medusa (GI, EP, WI)
3. Medusa resembles me (GI, EP, WI)
4. I identify with Medusa (GI, EP, WI)
5. Medusa is like me in many ways (EP, WI)
6. Medusa is an extension of myself (GI, EP, WI)
7. In the game, it is as if I become one with Medusa (GI, EP, WI)
8. I feel like I am inside Medusa when playing (EP, WI)
9. When I am playing, it feels as if I am Medusa (EP, WI)
10. When I am playing, it feels as if I am transported into Medusa (EP, WI)
11. When playing, it feels as if my Medusa's body becomes my own (EP, WI)
12. In the game, it is as if I act directly through Medusa (GI, EP, WI)
13. I would like to be more like Medusa (GI, EP, WI)
14. If I could become like Medusa, I would (EP, WI)
15. Medusa is an example to me (GI, EP, WI)
16. Medusa is a better me (GI, EP, WI)
17. Medusa has characteristics that I would like to have (GI, EP, WI)

GI = Game Identification      EP = Embodied Presence      WI = Wishful Identification

### Interpersonal Reactivity Index

Scale: (1, Does Not Describe Me Well - 7, Describes Me Very Well)

1. I often have tender, concerned feelings for people less fortunate than me (EC)
2. I sometimes find it difficult to see things from the “other guy’s” point of view (PT)(-)
3. Sometimes I don’t feel very sorry for other people when they are having problems  
(EC)(-)
4. I try to look at everybody’s side of a disagreement before I make a decision. (PT)
5. When I see someone being taken advantage of, I feel kind of protective towards them.  
(EC)
6. I sometimes try to understand my friends better by imagining how things look from their perspective. (PT)
7. Other people’s misfortunes do not usually disturb me a great deal. (EC)(-)
8. If I’m sure I’m right about something, I don’t waste much time listening to other people’s arguments. (PT)(-)
9. When I see someone being treated unfairly, I sometimes don’t feel very much pity for them. (EC)(-)
10. I am often quite touched by things that I see happen. (EC)
11. I believe that there are two sides to every question and try to look at them both. (PT)
12. I would describe myself as a pretty soft-hearted person. (EC)
13. When I’m upset at someone, I usually try to “put myself in his shoes” for awhile. (PT)
14. Before criticizing somebody, I try to imagine how I would feel if I were in their place.  
(PT)



Note

(-) denotes item to be scored in reverse fashion)

PT = perspective-taking scale

EC = empathetic concern

**Rape Myth Acceptance Scale**

Response range from 1 to 7 with 1= strongly disagree and 7 = strongly agree

1. Women who claim rape are usually loose women
2. If a girl makes out with a guy and she lets things get out of hand, it is her own fault if her partner forces her to have sex.
3. In the majority of rapes, the victim is promiscuous or has a bad reputation.
4. A woman who is stuck-up deserves to be raped.
5. Many women have an unconscious wish to be raped, and may then unconsciously set up a situation in which they are likely to be attacked.
6. The majority of rape claims are false.
7. Many females who get raped have done something to deserve it,
8. Women who dress or behave in a sexually provocative manner are asking for it.
9. Good girls don't get raped
10. The degree of a woman's resistance should be a major factor in determining if she was raped.
11. Any healthy woman can successfully resist a rapist if she really wants to.
12. Most women fantasize about rape.

### The Ambivalent Sexism Inventory

On a 7-point scale (1 = Strongly Disagree; 7 = Strongly Agree)

1. No matter how accomplished he is, a man is not truly complete as a person unless he has the love of a woman. B
2. Many women are actually seeking special favors, such as hiring policies that favor them over men, under the guise of asking for "equality." H
3. In a disaster, women ought not necessarily to be rescued before men. B(-)
4. Most women interpret innocent remarks or acts as being sexist. H
5. Women are too easily offended. H
6. People are often truly happy in life without being romantically involved with a member of the other sex. B(-)
7. Feminists are not seeking for women to have more power than men. H(-)
8. Many women have a quality of purity that few men possess. B
9. Women should be cherished and protected by men. B
10. Most women fail to appreciate fully all that men do for them. H
11. Women seek to gain power by getting control over men. H
12. Every man ought to have a woman whom he adores. B
13. Men are complete without women. B(-)
14. Women exaggerate problems they have at work. H
15. Once a woman gets a man to commit to her, she usually tries to put him on a tight leash. H
16. When women lose to men in a fair competition, they typically complain about being discriminated against. H

17. A good woman should be set on a pedestal by her man. B
18. There are actually very few women who get a kick out of teasing men by seeming sexually available and then refusing male advances. H(-)
19. Women, compared to men, tend to have a superior moral sensibility. B
20. Men should be willing to sacrifice their own well-being in order to provide financially for the women in their lives. B
21. Feminists are making entirely reasonable demands of men. H(-)
22. Women, as compared to men, tend to have a more refined sense of culture and good taste.  
B

Copyright 1995 by Peter Glick and Susan T. Fiske.

H = Hostile Sexism, B = Benevolent Sexism, (-) = reverse scored item.

## Demographics

1. What is your current age?
2. Are you currently attending school as a student?
  - a. No
  - b. Yes
    - i. What is your current year?
      1. 1st
      2. 2nd
      3. 3rd
      4. 4th/5th
      5. Graduate
3. Choose one or more races and ethnicities that you consider yourself to be
  - a. White
  - b. Black or African American
  - c. American Indian or Alaska Native
  - d. Asian
  - e. Native Hawaiian or Pacific Islander
  - f. Spanish
  - g. Hispanic
  - h. LatinX
  - i. Other (please describe here)
4. How do you currently identify
  - a. Male
  - b. Female
  - c. Non-Binary
  - d. Other (please describe here)
  - e. Prefer not say
5. Have you (or anyone you know) been a victim of sexual aggression?
  - a. Yes
  - b. No
  - c. Prefer not to say
6. Here is a 7-point scale on which the political views that people might hold are arranged from extremely liberal (left) to extremely conservative (right). Where would you place yourself on this scale?

## **Informed Consent Form**

### **Informed Consent**

**Investigators:** Alexis Boyle, Dalila Jarvis, Joy Tartaglia, Tyler Sprowl

**Contact Information:** [gr-MedusaMQP@wpi.edu](mailto:gr-MedusaMQP@wpi.edu)

**Title of Research Study:** Medusa MQP Game Testing

### **Introduction:**

Welcome to the research study!

You are being asked to participate in a research study. Before you agree, however, you must be fully informed about the purpose of the study, the procedures to be followed, and any benefits, risks or discomfort that you may experience as a result of your participation. This form presents information about the study so that you may make a fully informed decision regarding your participation.

### **Purpose of the Study:**

The purpose of this study is to better understand the experiences that individuals have while playing a video game about the life and story of Medusa. We want to better understand reactions to the game, reactions to the different characters, as well as broader attitudes towards society and different societal roles. Some of the societal roles encountered in the game and asked about in the survey may be personal or sensitive in nature.

### **Procedures to be followed:**

You will be presented with a link to a game executable file to download. After you download this file, please run it by following the instructions on the screen and play through our game! Once you have finished the game (reached the credits rolling), you will then be redirected to a page to answer

some questions about your experience playing the video game, the characters, and broader attitudes towards society and societal roles. You may find some of the content in the video game and in the survey questions to be personal or sensitive in nature. If there are any questions that you are not comfortable answering, you may skip them. You can also withdraw at any time if you are uncomfortable playing the game or answering the questions.

**Time Required:** This study will take about 45-60 minutes of your time. This includes playing the video game.

**Risk to study participants:**

There are no physical or psychological risks beyond those in everyday life. However, it is important to note that you may experience uncomfortable scenarios about gender and society while playing the game as there is implied sexual content. Although there is nothing shown explicitly, these themes may cause discomfort. You can withdraw at anytime.

**Benefits to research participants:**

There are no direct benefits to you for participating in this research study. This study will help us understand how our game is perceived and played.

**Record keeping and confidentiality:**

All responses to this study will remain anonymous. Data will be analyzed in the aggregate and cannot be linked with you personally. Records of your participation in this study will be held confidential so far as permitted by law. Any publication or presentation of the data will not identify you.

**Voluntary Participation:** Your participation is completely voluntary.

**Right to Withdraw from the Study:** You have the right to withdraw from the study at any point in time without penalty.

**How to Withdraw from the Study:** If you want to withdraw from the study, please stop playing the game and/or exit the survey at any point in time. You will need to notify the researchers that you were unable to complete the study to earn credit. There is no penalty from withdrawing. You will still receive full credit.

**Payment:** If you are participating through a psychology course at WPI, you will earn 1 credit. If you are participating through another online platform (e.g. MTURK), you will earn the amount stated. If you are participating for extra credit, the instructor will be notified.

**For more information about this research or about the rights of research participants, or in case of research-related injury, contact:**

If you would like to contact the Principal Investigator in the study to discuss this research, please e-mail the research team ([gr-medusaMQP@wpi.edu](mailto:gr-medusaMQP@wpi.edu)). The student researchers can be contacted individually using the following information: Alexis Boyle ([aboyle@wpi.edu](mailto:aboyle@wpi.edu)), Dalila Jarvis ([dijarvis@wpi.edu](mailto:dijarvis@wpi.edu)), Tyler Sprowl ([tgsprowl@wpi.edu](mailto:tgsprowl@wpi.edu)), Joy Tartaglia ([jtartaglia@wpi.edu](mailto:jtartaglia@wpi.edu)).



The faculty advisors can be contacted here: Professor Jeanine Skorinko (skorinko@wpi.edu), Professor John Sanbonmatsu (js@wpi.edu) and Professor Jennifer deWinter (jdewinter@wpi.edu).

In addition, here is the contact information for the IRB Manager (Ruth McKeogh, Tel. 508 831-6699, Email: irb@wpi.edu ) and the Human Protection Administrator (Gabriel Johnson, Tel. 508-831-4989, Email: gjohnson@wpi.edu).

Due to the sensitive nature of this video game and its surrounding themes, resources can be found below.

**SDCC (Student Development & Counseling Center)**

The SDCC offers free, confidential mental health counseling and consultation services for individuals, couples, and groups, as well as crisis intervention and referrals to local specialists as necessary. Without exception, each student will be treated with compassion and respect, and counselors will work with them to set goals, identify obstacles, and move in a valued direction.

Website: <https://www.wpi.edu/offices/student-development-counseling-center>

Phone Number: 508-831-5540

WPI Email: [sdcc@wpi.edu](mailto:sdcc@wpi.edu)

Address: 16 Einhorn Road, Worcester, MA 01609

By clicking the button below, you acknowledge that your participation in the study is voluntary, you are at least 18 years of age, and that you are aware that you may choose to terminate your participation in the study at any time and for any reason.

Please note that this survey will be best displayed on a laptop or desktop computer. Some features may be less compatible or unable to be completed for use on a mobile device. You also acknowledge that you are comfortable downloading a game file to play the game.

### **Debriefing Page**

Due to the sensitive nature of this video game and its surrounding themes, resources can be found below.

#### **SDCC (Student Development & Counseling Center)**

The SDCC offers free, confidential mental health counseling and consultation services for individuals, couples, and groups, as well as crisis intervention and referrals to local specialists as necessary. Without exception, each student will be treated with compassion and respect, and counselors will work with them to set goals, identify obstacles, and move in a valued direction.

Website: <https://www.wpi.edu/offices/student-development-counseling-center>

Phone Number: 508-831-5540

WPI Email: [sdcc@wpi.edu](mailto:sdcc@wpi.edu)

Address: 16 Einhorn Road, Worcester, MA 01609

### **Debriefing Statement**

#### **Thank you for participating in our study!**

Now that you have fully completed the study, we are now able to debrief you on the purpose of our study and our hypotheses. We will be reviewing the design and events within the video game. If at any time you feel uncomfortable, please feel free to reference the contact information of the Student Development Counseling Center above. In this study, we were interested in whether playing a game

about the story of Medusa would influence empathy felt towards Medusa and rape myth acceptance (the level of acceptance an individual has towards myths about rape). To study this, some of you were randomly assigned to play a game about Medusa where you played Perseus and the game ended as you were about to kill Medusa. Some of you were randomly assigned to play a game about Medusa where you played Perseus, but as you were able to kill Medusa, you transformed and started playing the game as Medusa before she was cursed up until she was cursed and about to be killed by Perseus.

After playing the game, we measured the amount of empathy you felt towards Perseus and Medusa. We also measured how much you identified with each character while playing the game. To see if playing the game changed attitudes towards rape myths, we measured rape myth acceptance. We also assessed general reactions towards the game.

We hypothesize that playing the full game (as Perseus and Medusa) will increase participant's empathy for Medusa as well as produce lower rape myth acceptance values than playing the shortened game (playing only as Perseus).

If you are interested in learning more, we recommend looking at the article below:

"Fair Play": A Videogame Designed to Address Implicit Race Bias Through Active Perspective Taking (Belinda Gutierrez, Anna Kaatz, Sarah Chu, Dennis Ramirez, Clem Samson-Samuel, and Molly Carnes. *Games for Health Journal*. Dec 2014. 371-378. <http://doi.org/10.1089/g4h.2013.0071>)

If you have any questions, comments and/or concerns, please feel free to reach out to the research team ([gr-medusaMQP@wpi.edu](mailto:gr-medusaMQP@wpi.edu)).

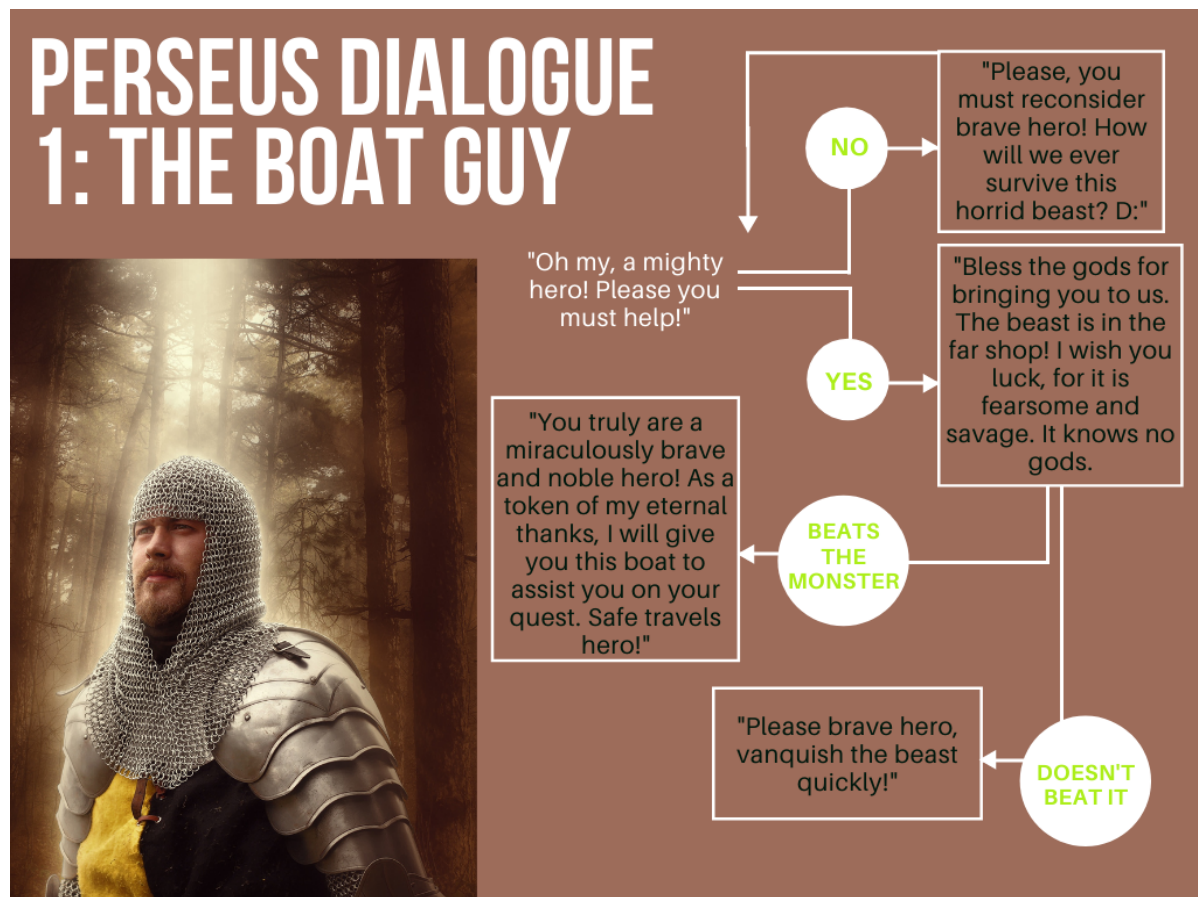
By clicking the button below, you acknowledge that you have been debriefed and shown the resources above.

## Appendix D

### Original Game Design Documents

#### 1. Dialogue Trees and Reasoning Behind Dialogue Design

These flow charts were created with the format of the text in the white Circles being response options presented to the player. The text in boxes was direct dialogue that the player would have seen in response to an event within the game. The white text outside of a box represented the starting text that would appear whenever the player interacted with the specific NPC. In the case of the scene below, the NPC being interacted with was the owner of the boat shop who the team referred to as the boat guy in early development stages. After the dialogue tree for a section of the game has been shown, the outline for the team's reasoning behind the design choices of the dialogue will be presented.



The Boat Guy

1. **Main point: Get the player to understand who they are and set the background expectations for this character**

- a. “Oh my, a mighty hero! Please you must help!”
  - i. *Fits into the male fantasy of saving everyone*
  - ii. *Mighty Male fantasy*
    - 1. *Men are “powerful” and “needed” by regular folks*
- b. No
  - i. “Please you must reconsider brave hero! How will we ever survive this horrid beast?”
    - 1. *Enforces strong mighty brave man beating saving everyone stereotype*
    - 2. *Forces the story to halt until the player completes the action required*
- c. Yes
  - i. “Bless the gods for bringing you to us. The beast is in the far shop. I wish you luck, for it is fearsome and savage. It knows no gods.”
    - 1. *Polytheistic enforcement to tie in setting*
    - 2. *Gives player the next step in the game*
    - 3. Fearsome and savage
      - a. *A creature that is unknown and not similar to the humans, bringing about the topic of speciesism. It hasn't been said that the “beast” they are referring to has done any harm, it is just assumed due to this person calling it a “beast”*
    - 4. Knows no gods
      - a. *Ties into superiority of religion. Since the “beast” does not appear to follow the same religion as the people, it adds to the view that it is savage.*
      - b. *Enforces setting once more*
- d. Comes back before he talks to the “beast”
  - i. “Please brave hero, vanquish the beast quickly!”
    - 1. *Enforces that the player must confront the “beast” to move on*

2. *Enforces the “brave hero” stereotype (even though we have no idea if the “hero” has done anything at all ever.*
  3. *“Vanquish” as though it is a heroic deed being asked to be performed rather than slaughtering a sentient being without any knowledge of it or its background*
- e. Comes back once the “beast” has been “slayed”
- i. “You truly are as miraculous as legend says!”
    1. *Enforces that the player has committed a great act of heroism*
    2. *Rewards player for mindless slaughter of the sentient being*
  - ii. “As a token of my eternal thanks, I will give you this boat. Safe travels hero!”
    1. *Notifies the player that this portion of the story has been fulfilled.*
    2. *Suggests that the player will need the boat to carry on with the story*
    3. *“Eternal thanks” reinforces the ‘great deed’ the player has done, again reinforcing that the player is a brave and heroic masculine character who is rewarded for mindless slaughter*

## PERSEUS DIALOGUE 2: THE SHOP BEAST



"How dare a Beast like yourself enter a shop for humans. You will pay for this insolence with your life."

"You dare to command me as though I were your subordinate? Do not be so bold as to believe you are superior simply because you are humankind. Your unquenchable thirst for violence and slaughter does not make you superior."

"It is time for you to pay for your foul words."

The Shop Beast Dialogue Design Reasoning:

- f. Main point/purpose: Give the player more insight into who they are playing as well as entering the visible speciesism and violence in the world of being a typical masculine ‘hero’**
- i. “Beast, you have no business here. I, the great hero Perseus, demand you leave at once.”
    1. “Beast, you have no business here.”
      - a. *Reinforces speciesism*
    2. “I, the great hero Perseus, demand you leave at once”
      - a. *Gives player more insight and understanding into the character they are playing*
      - b. *Shows the character’s bold ego*
        - i. *That was also inflated severely by the boat dude’s comments*
      - c. *Forcing the character’s will upon others because they feel entitled*
  - ii. “Persues, eh? You dare to command me as though I were your subordinate? Do not be so bold as to believe you are superior simply because you are humankind and have an unquenchable thirst for violence and slaughter”
    1. “Perseus , eh?”
      - a. *Slight mockery to the character’s ego*
      - b. *Bursts a hole in the balloon of inflated heroic ego*
    2. “You dare to command me as though I were your subordinate?”
      - a. *Makes the player consider the fact that they were essentially forcing their will upon this being and felt entitled to do so*
      - b. *Gives the “beast” humanizing qualities such as thought, a sense of self, and standing up for themselves.*
    3. “Do not be so bold as to believe you are superior simply because you are humankind and have an unquenchable thirst for violence and slaughter.”
      - a. *Points out the character’s entitled sense of superiority*
      - b. *Speciesism*



c. *Notes the unreasonable violence and mindless slaughter, especially connecting it to humankind*

iii. “Hold your tongue Beast. I have warned you and now it is time for you to pay for your foul words.”

1. *Still refers to this obviously sentient and thoughtful being as a Beast, showing speciesism*
2. *Ignores all points the “beast” made, showing small-mindedness and arrogance*
3. *Since he has been further insulted, the character believes the beast deserves to die*

## PERSEUS DIALOGUE 3: THE GUY BY THE BOAT


"I saw you slay that beast. As thanks I wish to impart wisdom upon you if you will be so kind as to let me."

NO

YES

"If you are off to hunt the beast that lives on the shore ahead, you must heed my warning."

"There was never a beast like the snake-haired wretch. Even before she was cursed, she was a witch. She was trouble, even though she was "dedicated" to the Goddess Athena. She got what she deserved then, and now we are all glad that you are coming to deliver the final blow to the temptress and end her reign of terror."



### The Guy By The Boat Dialogue Reasoning:

1. **Main point/purpose: Bring out the main focus of the game: Medusa. Sets a background for the tragicness Medusa has faced**

- g. "I saw you slay that beast. As thanks I wish to impart wisdom upon you, if you would be so kind as to let me"
- i. No
    1. "If you are off to hunt the beast that lives on the shore ahead, you must heed my warning"
      - a. *Make it clear that the player can't continue until they listen to this random dude talk*
      - b. *Piques interest in the story as the character has given the player new information about a mysterious beast they are hunting.*
  - ii. Yes
    1. "There was never a beast like the snake-haired wretch."
      - a. *Lets the player know its Medusa*
      - b. *Gets them more interested in the story*
    2. "Even before she was cursed to lose her beauty, she was a witch."
      - a. *Gives the player a little backstory*
      - b. *Makes the player curious about before Medusa was cursed (back when she was not commonly referred to as a beast)*
    3. "She enchanted men with her fair looks, but vowed herself to the goddess Athena. She used her looks to constantly poise men against their honor and yet never allowed a single man to gain the treasure she teased them with."
      - a. INSERT MISOGYNY
      - b. "Enchanted men with her fair looks but vowed herself to the goddess athena"
        - i. *Essentially stating that because she was pretty, it was her fault men were attracted to her*
        - ii. *She was a b\*\*\*\* for being so pretty but taking a vow of chastity*

- c. “She used her looks to constantly poise men against their honor and yet never allowed a single man to gain the treasure she teased them with.”
  - i. *Blaming her and her natural attractiveness for men being dishonorable*
    - 1. *Victim blaming, rape culture*
  - ii. Claims she was teasing men but never actually allowed them to get the ‘prize’
    - 1. *Allows the player to think about the meaning behind what the ‘prize’ may have been*
      - a. *Avoids our dialogue being extremely vulgar and graphic while still getting the point across*
    - 2. *Blaming her once more for them wanting the ‘prize’ and her not consenting, as though she was ‘asking for it’*

# PRECURSE MEDUSA DIALOGUE 1A: THE INTRODUCTION



"Good morning my dear Priestess. Are you ready to prepare for the festival?"

NO

"Come see me when you are prepared"

YES

"I am very honored to be allowed to assist in such a large deed of worship as preparing the festival for our gods!"

"Yes Priestess Agatha"

"Good! It is time for you to go into town and help set up. I will be there after long with the stew. Ensure there is a fire fed to keep the broth warm once I arrive."

## The Introduction

1. **Main Point: Introduce the player to their new character and setting**
2. "Good morning my dear Priestess. Are you ready to prepare for the festival?"
  - a. Gives context to who the player is
  - b. Gives context that there is a bond between the player and this character
  - c. Gives setting about a festival going on today and that the player will be preparing for it
  - d. "No"
    - i. Gives the illusion of an option/choice
    - ii. "Come see me when you are prepared"
      1. Allows the player to choose to continue when they want
      2. Forces player to follow the story to continue the game play though
  - e. Yes

- i. “I am very honored to be allowed to assist in such a large deed of worship as preparing the festival for our gods!”

*1. Context as to the festival*

- 3. “Good! It is time for you to go into town and help set up. I will be there after long with the stew. Ensure there is a fire fed to keep the broth warm once I arrive.”

- a. *Gives the player the next step in the game*

- 4. “Yes Priestess Agatha”

- a. *Gives a name to the character, suggesting they’ll be important.*

- b. *Tells the player go to do the things*

## PRECURSE MEDUSA DIALOGUE 1.5: THOUGHTS TO MARKET



### 1 Leaving the house

"Priestess Agatha was the closest thing I have ever had to a friend or a sister. When I was younger and had nowhere left to turn, picking crumbs off of the tavern floor to find meals, Priestess Agatha saw me slumbering outside of the Temple of Athena in the neighboring town, hiding from the rain. She took me in as family and taught me the ways of our Goddess. I have devoted my life to the service of the Goddess with gratitude, for I surely would not have survived much longer without being brought to her light.

### 2 Walking through the little village

"Similar to Priestess Agatha, the townspeople have accepted me into their community. Their kindness and acceptance has brought true light and joy into my life."

### 3 Entering the town

"In the town square is where the Temple lies: the place I feel most safe and devote most of my time. The Goddess Athena has given me strength, resilience, and sisters where I have previously had none. I owe the happiness of my life to her and so will devote mine to expressing my gratitude.

### Thoughts to the Market

- a. **Main Point: Give the player more backstory and allow them opportunities to emotionally connect, empathize, sympathize, and/or relate to the character**

- b. I created sections based on player location that I imagine we would have the thoughts dialogue pop up
- c. When Leaving the House
  - i. “Priestess Agatha was the closest thing I have ever had to a friend or a sister. When I was younger and had nowhere left to turn, picking crumbs off of the tavern floor to find meals, Priestess Agatha saw me slumbering outside of the Temple of Athena in the neighboring town, hiding from the rain. She took me in as family and taught me the ways of our Goddess. I have devoted my life to the service of the Goddess with gratitude, for I surely would not have survived much longer without being brought to her light.”
    1. *Gives player backstory*
    2. *Starts creating deeper bond with the Priestess*
    3. *Starts creating deeper bond with the character*
- d. Walking through the village to the town square
  - i. “Similar to Priestess Agatha, the townspeople have accepted me into their community. Their kindness and acceptance has brought true light and joy into my life.”
    1. *Creates a bond with the place*
    2. *Furthers bond with character*
- e. Entering the town
  - i. “In the town square is where the Temple lies: the place I feel most safe and devote most of my time. The Goddess Athena has given me strength, resilience, and sisters where I have previously had none. I owe the happiness of my life to her and so will devote mine to expressing my gratitude.”
    1. *Location context clues*
    2. *Creates bond with the Temple*
    3. *Gives explanation to who the Goddess is*
    4. *Furthers bond with the character*

## PRECURSE MEDUSA DIALOGUE 2A: THE FIRST MALES



"Well look at what we have here lads. The lovely Medusa has come to pay us a visit."

"There's no need to go trying to run off little lady."

"You've been slippery and playing hard to get since you came to town. All us men could talk about was how badly you;ve been teasing us strutting about town all sultry and dressed up for us."

"Please listen to me, I am simply here to devote my services to the goddess Athena. Please leave me be!"

"You don't have to keep the sweet and innocent act up with us sweetie."

"We know you only pretend to make yourself an even greater prize and an even bigger temptation."

"My body is not an object created to give you enjoyment. My body and my life are dedicated to the great Goddess Athena."

"I swear to the gods I have had no intentions of doing anything of the sort"

"Yeah right"

"We see you walking around in your robes all the time!"

"With your golden hair curling around your gorgeous frame"

Defend yourself

state you had no intentions of doing that

### 1. The First Males

a. **Main Point: Introduce Misogyny to the gameworld and the player while showing struggles that the character deals with regularly.**

b. "“Well look at what we have here lads. The lovely Medusa has come to pay us a visit.”"

"There's no need to go trying to run off little lady."

"You've been slippery and playing hard to get since you came to town. All us men could talk about was how badly you;ve been teasing us, strutting about town all sultry and dressed up for us."

i. *Context to misogyny in town*

ii. *Gives a little backstory for player*

iii. *Mimics catcalling*

iv. "State you had no intention of doing such a thing”"

1. "I swear to the gods I have had no intentions of doing anything of the sort"
  - a. *Shows the character's innocence*
  - b. *Gentle way to end the discussion*
  - c. *Equivalent to telling the catcaller you have a boyfriend as a gentle method to persuade them to leave you alone*
  - d. *Illusion of choice*

2. "Yeah right"

"We see you walking around in your robes all the time!"

"With your golden hair curling around your gorgeous frame"

- a. *Ignoring the female and her attempting to set boundaries*
- b. *Still acting as though her body is provocative and for their enjoyment merely by existing*
- c. *Sexualizing her outfit and implying she is intending to come across as sexual by wearing it*

c. Defend Yourself

- i. "My body is not an object created to give you enjoyment. My body and my life are dedicated to the great Goddess Athena."

1. *Clearly calls out the sexualization of her body and reaffirms her devotion to the Goddess, discouraging further comments.*
2. *The illusion of choice forced her to be aggressive when standing up for herself because they wouldn't listen to her the other way*

- ii. "You don't have to keep the sweet and innocent act up with us sweetie."

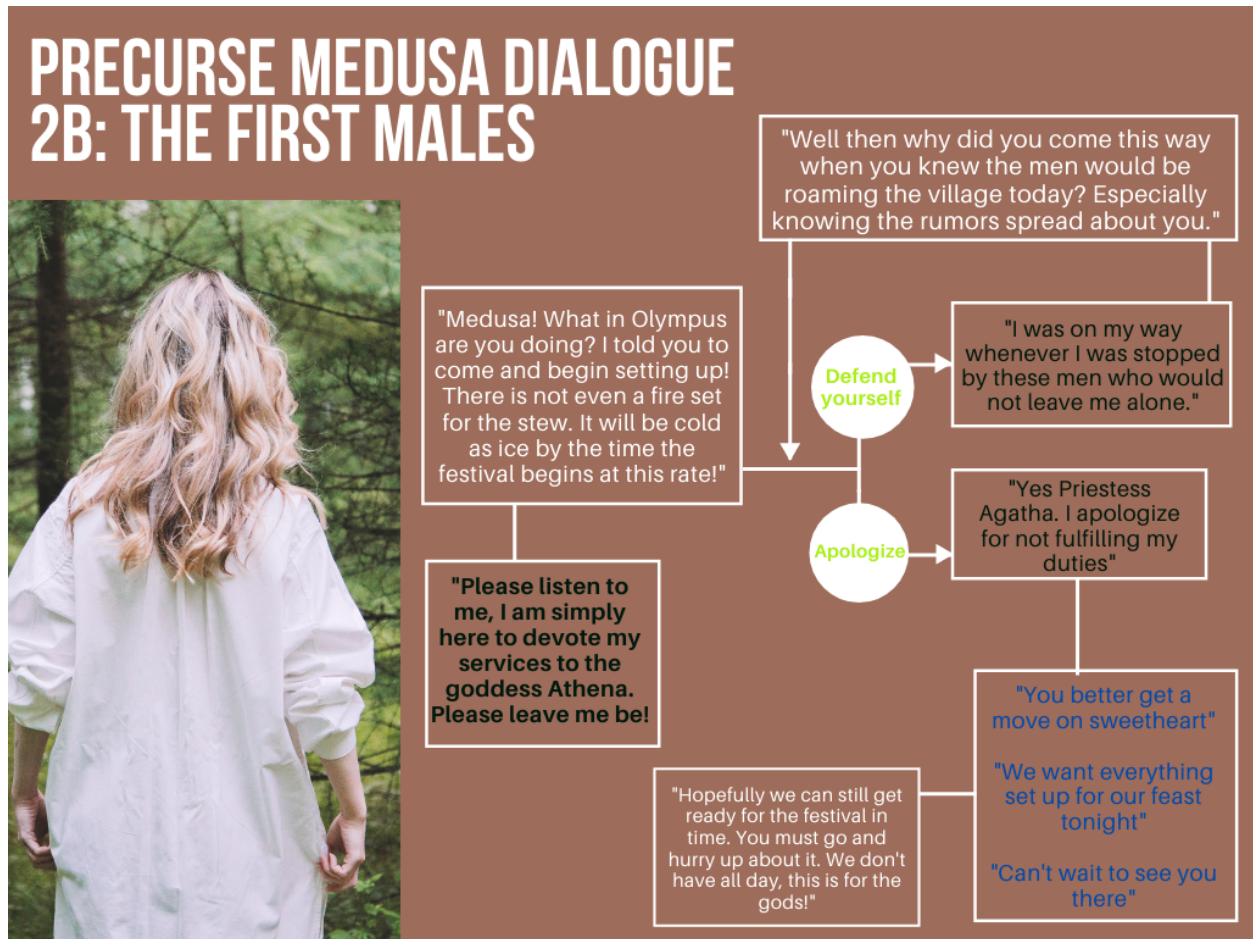
"We know you only pretend to make yourself an even greater prize and an even bigger temptation."

1. *Disrespect for her boundaries and words (just her generally tbh)*
2. *Sexualizing her*
3. *Acting as though everything she has done has been in regards to how attractive the men find her (like men do with makeup, outfits, jobs, etc.)*



- d. "Please listen to me, I am simply here to devote my services to the goddess Athena. Please leave me be!"

1. *Reinforcing the character's innocence and goals*



"Medusa! What in Olympus are you doing? I told you to come and begin setting up! There is not even a fire set for the stew! It will be cold as ice by the time the festival begins!"

- i. *Ends the tension with the males*
- ii. *Brings the target back onto task*
- iii. **Defend Yourself**

1. "I was on my way when I was stopped by these men who would not leave me alone."
    - a. *Defending herself*
    - b. *Putting blame on the men as she should*
  2. "Well then why did you come this way when you knew the men would be roaming the village today? Especially knowing the rumors spread about you."
    - a. *Puts the blame back on the victim*
- b. Apologize and Take Blame
- i. "Yes Priestess Agatha. I apologize for not fulfilling my duties."
    1. *Takes blame as the only way to move on with the story due to patriarchy*
    2. "You better get a move on sweetheart"

"We want everything set up for our feast tonight"

"Can't wait to see you there"

    - a. *Ending male scene*
    - b. *Leaving an ominous and frustrated feeling with the player*
    - c. *Suggests they show back up later and there is trouble*
  - c. "Hopefully we can still get ready for the festival in time. You must go and hurry up about it! We don't have all day! This is for the gods!"
    - i. *Sense of urgency*
      1. *Blamed on the player when it wasn't their fault*
    - ii. *Reasserts the players mission*

## PRECURSE MEDUSA DIALOGUE 2.5: THOUGHTS WHEN BEGINNING SET UP



### 1 Beginning to get supplies

"I am scared of seeing those men again tonight. However, I know that this is a special night for the gods and I have faith that my Goddess Athena will protect me. She knew of the struggles I would face when I devoted myself to her. Knowing that she will protect me gives me strength to continue each day, especially since she has blessed us with her safe space of the Temple where no man can enter."

### 2 Looking for supplies

"If only I had avoided the men like I should have. This would have been an easier task for all. I feel embarrassed for being so unhelpful and disrespectful to the Priestess. After everything she has done for me (taking me in, teaching me the ways of the Goddess, being my friend, and guiding me into this life of happiness) I cannot even guarantee that a simple fire is made like she asked. I need to focus: wasting time lost in thought won't help anybody now"

### Thoughts When Beginning Set Up

- a. **Main Point: Showcase the effects these recurring instances against sexism have upon the character while continuing the story and giving slight foreshadowing**
- b. Beginning to get supplies
  - i. "I am scared of seeing those men again tonight. However, I know that this is a special night for the gods and I have faith that my Goddess Athena will protect me. She knew of the struggles I would face when I devoted myself to her. Knowing that she will protect me gives me strength to continue each day, especially since she has blessed us with her safe space of the Temple where no man can enter."
    1. *Enforces the fear of men bc of misogynistic culture where they are punished at all*
    2. *Faith in Goddess*

*a. Makes a good ouch moment later with what happens*

*3. Reinforces that men cannot enter the Temple*

c. Looking for supplies in Temple

i. "If only I had avoided the men like I should have. This would have been an easier task for all. I feel embarrassed for being so unhelpful and disrespectful to the Priestess. After everything she has done for me (taking me in, teaching me the ways of the Goddess, being my friend, and guiding me into this life of happiness) I cannot even guarantee that a simple fire is made like she asked. I need to focus: wasting time lost in thought won't help anybody now

*1. Enforces guilt from victim blaming*

*2. Reinforces the gratefulness and bond with the Priestess Agatha*

## PRECURSE MEDUSA DIALOGUE 3: END OF THE FESTIVAL



"Medusa you must begin to pay attention when I direct you! \*ahem\* If you are listening now, you must go and gather the offerings left for our Goddess Athena and bring them back to the Temple. I will bring the remaining supplies back now and guide you on how to properly devote the offerings to our Goddess once you meet me at the Temple."

"Yes Priestess Agatha."

### End of Festival

- a. **Main Point: Instruct the player on the next steps required to be completed while setting the scene for future events**
- b. "Medusa you must begin to pay attention when I direct you! \*ahem\* If you are listening now, you must go and gather the offerings left for our Goddess Athena and bring them back to the Temple. I will bring the remaining supplies back now and guide you on how to properly devote the offerings to our Goddess once you meet me at the Temple."
  - i. *Tells the player what to do next*
  - ii. *Telling Medusa to pay attention could be a good excuse for why there is like the little flash when the festival should be.*
- c. "Yes Priestess Agatha."

- i. *Confirms that this is what the player must do to continue the game*

## PRECURSE MEDUSA DIALOGUE 3.5: TO THE TEMPLE



**1 Gathering Offerings**

*"I feel as though I am being watched. It seems that the only person is that old man. He appears to be enjoying the night air ... It is unusually humid tonight. At least it's not those men from earlier.*

**2 Walking to the Temple**

*"The old man seems to be following me. I should probably hurry back to the Temple just in case, this seems pretty weird and creepy.*

**3 Entering the Temple**

*"The old man is just standing there staring at me. Oh well, he can't enter the Temple and he'll probably get bored of waiting outside and just leave.*

### Thoughts on the way to the Temple

- a. **Main Point: Introduce more misogynistic creepiness that the character faces as well as an ominous situation that will “determine” the rest of the story.**
- b. Gathering Offerings
- i. "I feel as though I am being watched. It seems that the only person is that old man. He appears to be enjoying the night air ... It is unusually humid tonight. At least it's not those men from earlier.
1. *Brings notice to the old dude and that he's being creepy*
  2. *Humid bc it's Poseidon and humidity is just a lot of water in the air*

3. *Notes that the men from earlier are still a concern even though they aren't even around*

c. Walking to the Temple

- i. "The old man seems to be following me. I should probably hurry back to the Temple just in case, this seems pretty weird and creepy.

1. *Notes that the old dude is following her like a creep*
2. *Makes her hurry to the Temple and safety rather than confronting him even though he's an old guy bc patriarchy and victim blaming*

d. Entering the Temple

- i. "The old man is just standing there staring at me. Oh well, he can't enter the Temple and he'll probably get bored of waiting outside and just leave.

1. *Creepy guy staring and girl expected to deal with it instead of saying something like a man would*
2. *Notes again that dudes can't enter the temple*
3. *Uh Oh ominous foreshadowing?*



# TEMPLE CUTSCENE DIALOGUE 1: THE INTRODUCTION



"Priestess Agatha, I have returned with all of the offerings left for our Goddess."

## 1. The Introduction

- a. **Main Point: Create context for player**
- b. "Priestess Agatha, I have returned with all of the offerings left for our Goddess."
  - i. *Gives player context*



# TEMPLE CUTSCENE DIALOGUE 1.5: THOUGHTS INTRODUCTION



## 1 Entering the Temple

*"Priestess Agatha would likely want me to go ahead and start setting the offerings at the base of the statue. I should start working on that."*

## 2 At the statue base

*"I feel like there is something behind me, but there could be nothing behind me since there is only the reflection pool and the entrance and I didn't hear the door open..."*

## 3 Poseidon Arrives

*"It sounds like wet footsteps behind me but I am too frightened to look. A large damp hand places itself upon my shoulder."*

*"My vision goes black and I scream and fight and beg for him not to commit this heinous deed."*

### Thoughts Introduction

- a. **Main Point: Give details to the scene and engage the player deeply in the story and perspective-taking/empathizing**
- b. I created sections based on player location that I imagine we would have the thoughts dialogue pop up
- c. Entering the Temple
  - i. "Priestess Agatha would likely want me to go ahead and start setting the offerings at the base of the statue. I should start working on that."
    1. *Tells the player what to do*
- d. At the statue base
  - i. "I feel like there is something behind me, but there could be nothing behind me since there is only the reflection pool and the entrance and I didn't hear the door open..."

1. *Creeeeeppppppyyyyyy*

- e. Posiedon arrives

- i. ““It sounds like wet footsteps behind me but I am too frightened to look. A large damp hand places itself upon my shoulder.

My vision goes black and I scream and fight and beg for him not to commit this heinous deed.”

1. *Sets the scene w/out being too detailed*
2. *Wet footsteps = Poseidon*
3. *Too frightened to look = no player control*
4. *Vision goes black = explaining why player can't see*
5. *Scream, fight and beg him not to do this = lack of power and obvious nonconsent*

## TEMPLE CUTSCENE DIALOGUE 2: ATHENA COMES TO PLAY



FIRST

"Great Goddess why has this happened to me?! I have wanted nothing but to dedicate my life to giving you gratitude and sharing your wisdom and grace with the world. I was supposed to be safe here within the sacred walls of your temple, but I have been defiled. Please lend me your strength Great Goddess. Lend me your strength and your wisdom so I may know how to move past this deed and enact revenge upon the one who forced his will upon me along with all others like him."

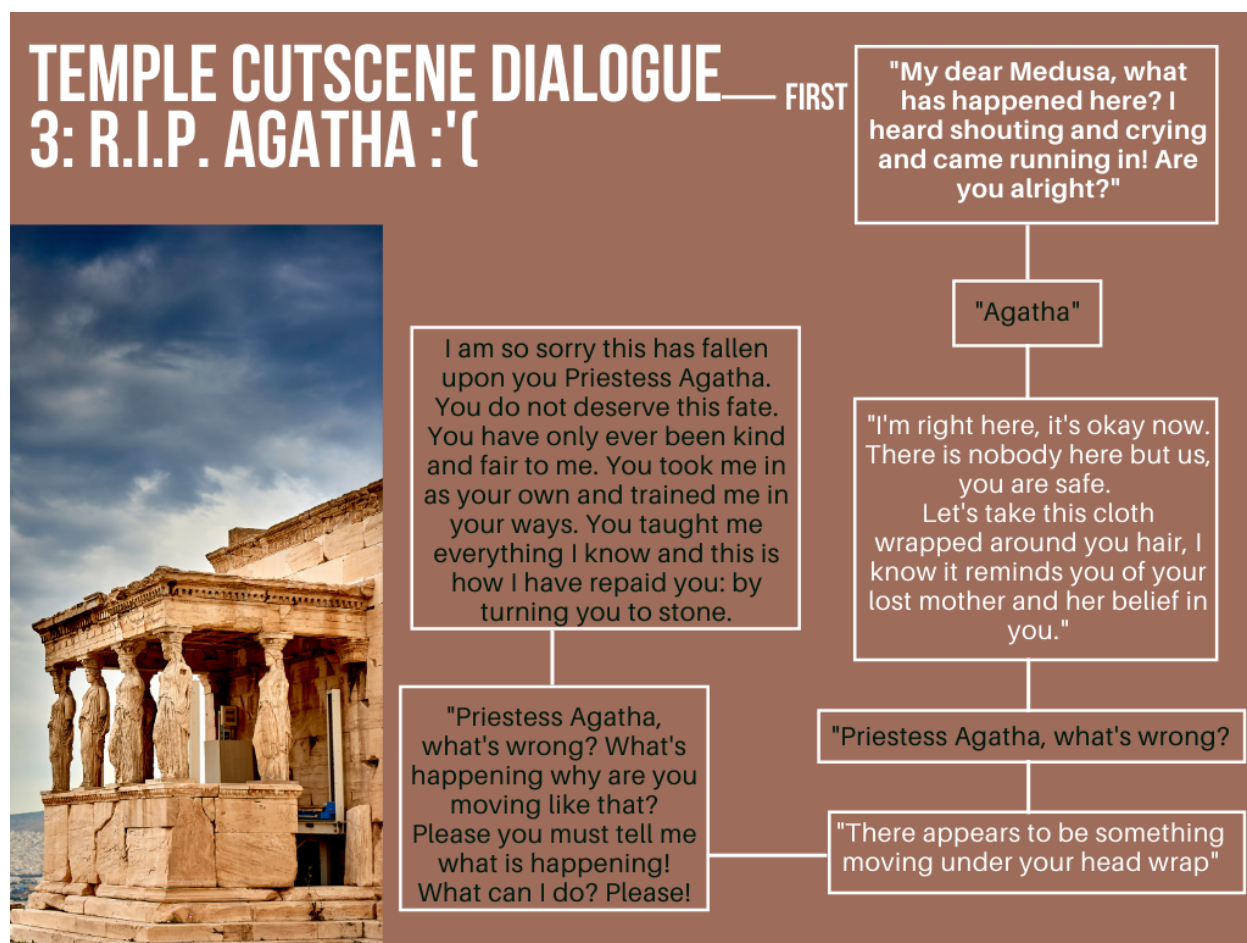
"You have disrespected me and in my own Temple no less. You mere mortal break your oath of chastity to me at the feet of my very own statue within the sacred walls of my Temple. Then you feel it is wise to call upon me and ask for my strength and wisdom?"

"You are foolish and will be punished for your insolence. You will be a curse to all who look upon your once beautiful face!"

### Athena Comes to Play

- a. **Main Point: Represent how Medusa was unfairly cursed by Athena**
- b. "Great Goddess why has this happened to me?! I have wanted nothing but to dedicate my life to giving you gratitude and sharing your wisdom and grace with the world. I was supposed to be safe here within the sacred walls of your temple, but I have been defiled. Please lend me your strength Great Goddess. Lend me your strength and your wisdom so I may know how to move past this deed and enact revenge upon the one who forced his will upon me along with all others like him."
  - i. *Expresses character's pain*
  - ii. *Empathizing moment*
- c. "You have disrespected me and in my own Temple no less. You mere mortal break your oath of chastity to me at the feet of my very own statue within the sacred walls of my Temple. Then you feel it is wise to call upon me and ask for my strength and wisdom?"

1. *Uh-oh*
  2. *Shows you're about to get cursed and you are being blamed even though it isn't your fault*
- d. "You are foolish and will be punished for your insolence. You will be a curse to all who look upon your once beautiful face!"
- i. *Straight up says you're being cursed*
  - ii. *Poetically states what the curse is but leaves room for a hit in the gut moment*
  - iii. *Specifies look upon your face to explain cone mechanic*



### Agatha's Death

- a. **Main Point:** Show the player how the curse works and how traumatizing it is for Medusa.

- b. "My dear Medusa, what has happened here? I heard shouting and crying and came running in! Are you alright?"
- i. *A friend heard shit going down and came to check on you <3*
  - ii. *Empathizing moment*
  - iii. *Also suspense to see what happens with the curse*
- c. "I'm right here, it's okay now. There is nobody here but us, you are safe.  
Let's take this cloth wrapped around your hair, I know it reminds you of your lost mother and her belief in you."
- i. *Empathizing moment*
  - ii. *Also suspense to see what happens with the curse*
- d. "Priestess Agatha, what's wrong?"
- i. *SUSPENSE*
- e. "There appears to be something moving under your head wrap"
- i. *OH NO*
  - ii. *~~~ Snake hair ~~~*
- f. "Priestess Agatha, what's wrong? What's happening, why are you moving like that? Please you must tell me what is happening! What can I do? Please!"
- i. *OH NO SOMETHING IS HAPPENING TO HER OH NO WHY*
- g. I am so sorry this has fallen upon you Priestess Agatha. You do not deserve this fate. You have only ever been kind and fair to me. You took me in as your own and trained me in your ways. You taught me everything I know and this is how I have repaid you: by turning you to stone.
- i. *Empathizing moment*
  - ii. *Enhances feelings of betrayal, loss, unfairness, helplessness, anger and esp. Guilt*

# POST-CURSE MEDUSA DIALOGUE 1: LEAVING THE TEMPLE



"I heard screams from over here! Please hurry I don't know if anyone is hurt!"

"Medusa is that you? Were you awaiting our arrival? I told you I could see her trembling with anticipation lads, haha"

## Leaving the Temple

- a. "I heard screams from over here! Please hurry, I don't know if anyone is hurt!"
  - i. *Gives player context*
    1. *Let's them know that people are running towards the temple*
      - a. *AKA they gotta go FAST*
- b. "Medusa is that you? Were you awaiting our arrival?  
I told you I could see her trembling with anticipation lads, haha"
  - i. *Presents an opportunity for the player to turn them to stone or not*
  - ii. *They're still disgusting*

# POST-CURSE MEDUSA DIALOGUE 1.5: THOUGHTS WHEN LEAVING



## 1 Leaving the Temple

"I can escape to the nearby island. Nobody goes there because of the rumors of monsters. I'll steal a boat from the marketplace!"

## 2 After people shout

"I must leave before I am seen, else they shall know the evil deed was mine. Or worse, this curse afflicting me harms another innocent soul."

## 3 After men shout

Turn the men to stone

Spare the men

"They won't harm anybody anymore..."

"I must leave before anyone else gets harmed. The decision between one's life and their death is not one I am worthy to make."

## 3 After Reaching Island


"I must find a place to hide and live on this island so nobody finds me.."

- a. Leaving the Temple
  - i. "I can escape to the nearby island. Nobody goes there because of the rumors of monsters. I'll steal a boat from the marketplace!"
    1. *Tells the player what to do*
- b. After people shout for help
  - i. "I must leave before I am seen, else they shall know the evil deed was mine. Or worse, this curse afflicting me harms another innocent soul."
    1. *Enforces time sensitivity*
- c. After the men shout
  - i. Spare the Men
    1. "I must leave before anyone else gets harmed. The decision between one's life and their death is not one I am worthy to make."



- a. *Illusion of choice*
- ii. Turn the Men to Stone
  - 1. "They won't harm anybody anymore..."
    - a. *Illusion of choice*
- d. When Reaching Island
  - i. "I must find a place to hide and live on this island so nobody finds me.."
    - 1. *Tells the player what to do*

## POST-CURSE MEDUSA DIALOGUE 2: REACHED THE ISLAND



"There are tracks leading this way! She must be over here!"

"She's here! She seems to be running towards the other side of the island!"

"Please leave me alone, I don't want to hurt you!"

"You will come back to town with us and we will be rewarded handsomely for returning you to them."

"You shall pay for this your horrid monster!"

### On the Island

- a. "There are tracks leading this way! She must be over here!"
  - i. *Shows player that they are being hunted*
  - ii. *Feeling of fear*
- b. ""She's here! She seems to be running towards the other side of the island!""



1. *Uh-oh*
  2. *Shows you're about to get caught and that you better go hella quick*
- c. "Please leave me alone, I don't want to hurt you!"
- i. *Medusa just begging for people to leave her alone like always*
- d. "You will come back to town with us and we will be rewarded handsomely for returning you to them."
- i. *They view her as just an object to trade for treasure.*
    1. *She is always just an object in the eyes of men and in society*
    - ii. *She better get a hecking move on or else bad things may happen*
- e. "You shall pay for this you horrid monster!"
- i. *The second guy threatening her after he got turned to stone when he didn't leave Medusa alone*

# POST-CURSE MEDUSA DIALOGUE

## 2.5: INTO THE CAVERN

### 1 The Mirror

I hold the mirror to my face, hoping that maybe this time I will be released from this curse and blessed with death. I fall asleep crying and holding the mirror, praying I wake and this nightmare ends

### Into the Cavern

1. I hold the mirror to my face, hoping that maybe this time I will be released from this curse and blessed with death. I fall asleep crying and holding the mirror, praying I wake and this nightmare ends
  - a. *Empathizing moment*
  - b. *Reinforces that Medusa is the victim*
  - c. *Helplessness and self blame*

## FINAL CUTSCENE DIALOGUE 1: THE BEGINNING OF PERSEUS'S MONOLOGUE



**"I have heard the tales of how you teased men with your beauty before the curse. This curse was rightfully placed upon you. I shall slay you, beast, and be rewarded as a hero. Let this lesson stand to all those who feel such behaviour and insubordination to men is acceptable.**

Final Cutscene:

- a. "I have heard the tales of how you teased men with your beauty before the curse. This curse was rightfully placed upon you. I shall slay you, beast, and be rewarded as a hero. Let this lesson stand to all those who feel such behaviour and insubordination to men is acceptable.
  - i. *Gives player brief summary and connection between two stories*
  - ii. *Victim blaming is supported by Perseus*
  - iii. *Society will reward Perseus as the hero*
  - iv. *Larger patriarchal theme*