ABSTRACT
This paper examines the first-person shooter *Borderlands 2* through the lens of the social model of disability and rhetoric. *Borderlands 2* encourages player agency while positioning the player within a visual rhetoric of disability. This combination of rhetoric and agency depicts disability as a social construct as opposed to the more common vision of disability as an innate flaw. This social model of disability within the game exists in tension with some ableist slurs and harmful stereotypes about disabled bodies also found in *Borderlands 2*. Nevertheless, *Borderlands 2* models one approach how games can depict disability without positioning the disabled body as undesirable or grotesque.

KEYWORDS: disability, agency, game design, aesthetics, mechanics
INTRODUCTION
The prototypical hero in video games is usually “able-bodied,” virtually indestructible, and possesses nearly endless stamina. Even with mechanical limitations on strength and athleticism built into the game, players are rarely confined to the scope of average human ability. Even rarer are depictions of disability in playable characters within video games, especially the first-person shooter (FPS) genre. Games more commonly feature disabled non-playable characters (NPCs). Horror shooter Dead Space (2008), for example, features disabled bodies throughout. However, these disabled bodies are rarely presented in a humanizing way. As Carr (2014) notes, Dead Space depicts disabled bodies as grotesque and objects of horror. Most of the antagonists in Dead Space are reanimated and mutated human bodies, but Dead Space is far from the only major game to do this. Many big-budget games produced by large game studios, often called AAA games, like Left 4 Dead 2 and the Resident Evil/Biohazard series feature zombies or mutants. There are noted exceptions to this trend in games, particularly in games that address autism (Gibbons, 2015), depression (Hoffman, 2017), mental illness (Shapiro & Rotter, 2016), and the body and queerness (Stone, 2018), but these depictions are rare and typically produced by smaller game studios. In contrast to this trend, Borderlands 2 (2012) and its accompanying downloadable content (DLC) includes disability in its playable characters, NPCs, and many of its in-game antagonists and engages with disability in its aesthetics, narrative, and mechanics. While Borderlands 2 is not without its own problematic language and treatment of disabled communities, the tensions in Borderlands 2 give the game’s rhetoric about disability more nuance than games like Dead Space by humanizing disabled bodies and providing players with limited representations of disabled agency within the game.

VISUAL RHETORIC AND PLAYER AGENCY
The most apparent representation of disability within Borderlands 2 is in the aesthetic elements of Pandora, the world of the game. While a great deal of research in video games has focused on the procedural rhetoric, and rightfully so, the aesthetic qualities of a game are rhetorical as well. In his discussion of the persuasive nature of video game aesthetics, Benjamin Abraham (2018) notes that at times the visual environment can be as persuasive as mechanical or procedural elements. The constant presence of visuals in a game naturalizes their argument for the player because the visual design is always present while procedural elements may not always be occurring in ways the player can sense (Abraham, 2018). This concept of visual argument does not discount the rhetorical force of mechanics or procedure. Instead it merely describes how a visual design can be uniquely persuasive alongside a game’s procedural rhetoric. Borderlands 2 employs this visual rhetoric throughout the entire game. In Pandora, no town or character is without some form of disability, even if that disability is not visually apparent. For example, the primary villain of the game, Handsome
Jack, wears a prosthetic face to appear more conventionally attractive because his face is badly scarred. This becomes narratively significant early in the game when he kills a woman for being badly scarred by acid because he considers her ugly. Beyond Handsome Jack, many NPCs have cybernetic modifications to replace missing limbs or augment their perception. The first human NPC the player encounters in the game is Sir Alistair Hammerlock who has a robotic eyeball, arm, and leg. Tiny Tina, one of the most prominent NPCs in the game, clearly has PTSD and clinical depression. For example, in a side-mission titled “You Are Cordially Invited: RSVP”, Tina asks players to lure an NPC named Flesh-Stick to the cave where she captures and tortures him as revenge for killing her parents. One of the game’s DLCs, “Tiny Tina’s Assault on Dragon Keep”, also deals with her trauma and depression as she grieves for the loss of a surrogate parent. Even the comical robot sidekick Claptrap admits that its voice has malfunctioned and is stuck in an optimistic and cheerful tone, which often masks its fear and anger.

In addition to the NPCs, landscape and inanimate objects of Pandora appear to be post-apocalyptic. The land is craggy and often arid, lacking significant vegetation, and most of the buildings are patched or look like they were constructed from scraps of metal. Borderlands is a world not concerned with pristine visuals unmarred by war, decay, time, but with imperfection. These aesthetic qualities present disability through what Tom Shakespeare (2006) would call the social model of disability. The medical model of disability, which has commonly been depicted in popular media, sees disability as individualistic and a deficiency (Shakespeare, 2006). Shakespeare’s social model recognizes disability as a social construct that is relative to the society where it exists. Society creates disability and the able body through how it defines these concepts. The greatest concern in the social model is how accessibility functions in society. While the planet of Pandora is a dystopian wasteland, accessibility isn’t portrayed as an issue. All the characters, even those with offensive monikers, are capable and able to do as they please. The advancements on Pandora using “eridium” technology increases equity among the NPC’s. These affordances give each NPC specific abilities dependent on their abilities and disabilities: some characters can jump higher, some run faster, some have stronger weapons, and some explode. Through the lens of the medical model, an NPC with mental illness or a cybernetic leg would be viewed as essentially abnormal and deficient like one of the creatures from Dead Space or Left 4 Dead 2. However, the social model would recognize those conditions as neither inherently abnormal nor deficient. Borderlands 2 does not position Pandora as a deficient world but a world where abled-ness and disability are determined differently from the world outside the game. While the post-apocalyptic aesthetic of Borderlands 2 may seem obvious, it may also be the most effective challenge to regressive ideologies of disability.

Beyond the aesthetic qualities of Pandora, disability is also normalized in select mechanics within the game. Simulating disability for the player on a
procedural level can be a significant challenge for game designers. In his monograph discussing how educators utilize the learning principles of games, James Paul Gee (2007) describes how games amplify a player’s input to reward their labor (p. 60-61). By pushing a single button, a player can perform the complex action of leaping from rooftop to rooftop or operating a sniper rifle. However, Gee also notes that diminishing player input could be deeply frustrating for players (p. 60), thus most games work to amplify a player’s input or their agency. As Janet Murray (1988) notes in her foundational work on video games and narrative, agency is “the satisfying power to take meaningful action and see the result of our decisions and choices” (p. 126). On the other hand, Karen Tanenbaum and Joshua Tanenbaum (2009) present agency as the process of “committing” to the “meaning” of a game (p. 7). They argue that instead of agency being freedom of choice or movement, as other theorists like Murray and Bogost argue, agency is experienced when “the player chooses to engage in this [the game’s] fiction, and to allow the drama of the moment to create the belief that her actions have meaningfully advanced the story” (p. 7). In either definition, however, agency exists within the player’s interaction with the text, whether that interaction is because of free mobility or commitment to meaning. Thus, reducing the amplification of a player’s interaction with the game would reduce their agency as well. Accordingly, Borderlands 2 does not adjust a player’s ability to interact with the world depending on their avatar. The original four avatars for Borderlands 2, Zer0, Axton, Maya, and Salvador, do not have any apparent disabilities, but the two characters added in DLC, Gaige and Krieg, do. Gaige has a cybernetic arm and Krieg is a “Psycho,” but neither avatar is more or less adept at navigating the game than the original four. In this way, player agency over their avatars is typical for those in other contemporary FPS.

While the avatars may exhibit no mechanical disability despite their aesthetics or backstory, the game does simulate a form of disability in the items players use. Most items, such as weapons and shields, possess at least one strength with one corresponding negative quality. This trade-off is distinct from standard forms of specialization found in games like World of Warcraft (2004) or Skyrim (2011), where specializing gives players unique strengths. In Borderlands 2, weapons and shields have unique weaknesses as well. Infusing these in-game items with weaknesses does resemble some foundational theories about games themselves, though they extend past them to create a diminished form of disability. For example, Ian Bogost (2008) describes how play exists in games and beyond as happening within possibility spaces (pp. 120-21). For Bogost and game designers Katie Salen Tekinbas and Eric Zimmerman (2003), play is free movement within a confined space, usually represented by a physical field in sports or by level design and hardware in digital games. Johan Huizinga (1950) describes this effect as a “magic circle” where rules about conduct and language differ from the outside world, like a courtroom or sports arena. Huizinga’s work, of course, predates digital games and focuses more on play within society.
at large. In a sense, the boundaries and limits of a possibility space are what the player uses for play itself. For example, a ball has inherent limitations due to its materials and the limits of the human body that kicks it, but without a ball, soccer would have no central object to manipulate or use for scoring purposes. Bogost and others are not dictating how games ought to be structured, but rather how they exist in most observable forms. So, in many respects, the mechanical limits of the items in *Borderlands 2* reflect this basic principle of game design.

However, *Borderlands* uniquely positions this common feature of game design within disability by adding items to the aesthetics of disability mentioned above. For example, the Spitter and the Scarab are two of the many standard assault rifles players can find at random. The Spitter is a small minigun with a high rate-of-fire and low accuracy, while the Scarab is much more accurate but has a very slow reloading speed and smaller magazine size. Beyond these simple mechanical differences, most guns in the game are given random qualities that increase their accuracy, rate-of-fire, magazine size, or damage, with most upgrades coming at the cost of another quality. Some weapons become more accurate as you continuously shoot them or use multiple rounds of ammunition in the same shot, which causes players to spend a great deal of ammunition but can do significant damage. In contrast, high damage weapons often have a smaller magazine or a slow rate-of-fire. Many guns are also given elemental modifiers, like explosive or poisonous ammunition, but even these elemental effects can be limiting as many enemies resist certain kinds of elemental damage while they are weak to others. These weaknesses are distinct from the limitations of guns in most FPS where shotguns are inaccurate at range or looking down the scope of a sniper rifle can make players vulnerable to surprise attacks. Many weapons in *Borderlands 2* have a tradeoff that goes beyond what would be found in most realistic gun simulations. While most shotguns have some utility at short-to-medium range, a weapon in *Borderlands 2* like the “Boom Stick” uses all its ammunition in a single shot, has a 0% rating in accuracy, is slow to reload, and can actually damage the player’s avatar if used at point-blank range. The Boom Stick can do significant damage in a single shot, but it comes with so many built-in weaknesses that it is nearly unusable. Not all weapons in *Borderlands 2* are so drastic in their mechanics, but a similar design principle applies across nearly all of them. In many other shooter games, players can discover the optimal weapon or ability to use, but within *Borderlands 2*, no weapon is truly optimal in all scenarios because of their inherent vulnerabilities in much the same way that no body or object within *Borderlands 2* is outside the social definition of disability. Guns do have a tier system which can affect the quality of the weapon and thus its value within the game, but these built-in weaknesses can be found even in weapons in the most advanced tiers. It is not that all items are “medically” disabled or individually inadequate; it is that all items have differing strengths and weaknesses and the optimal weapon, like the non-disabled body, does not exist.
The mechanical rhetoric of the items along with the visual rhetoric of Pandora puts players in a marginally disabled space by limiting their agency through how items, specifically weapons, function. Most video games position player agency within the possibility space through Gee’s “amplification of input” principle, as mentioned above. This makes the balance of creating disability within Borderlands 2 delicate because representing disability too accurately within the game could make it difficult to play. Drawing on the Sarah Gibbons (2015) discussion of disability studies and games, Borderlands 2 is not attempting to be a “simulation game” (p. 28) where the primary goal of the game is to provide the player with the experience of having a particular disability. Instead, Borderlands 2 is more interested in representing or identifying (Gibbons, 2015, p. 32) disability, even in the way its mechanics limit player agency. Making disability mechanically present in the items and not in the avatars themselves reinforces the game’s visual rhetoric regarding disability. Players visually experience a world of social disability, not a world of medical disability, and the items emphasize the social model of disability by placing it outside the essential characteristics of each avatar. No one avatar is medically disabled, though they will all equally experience disability through their interactions with the game world. In this sense, enabling player agency allows players to more readily experience Borderlands 2’s apparent ideology regarding disability as a social construct.

PROBLEMATIC TERMINOLOGY AND VISUALS

Despite the game’s synergy between its visual and procedural rhetoric, Borderlands 2 does participate in problematic depictions of disability. Most of the common human antagonists are labels instead of names, such as “Psycho”, “Lunatic”, “Goliath”, and “Midget”. All of these labels problematically reproduce a deeply regressive treatment of disability. Psycho and Lunatic are slurs for individuals with mental disabilities or able-bodied individuals who are seen as inferior or neuro-atypical. Goliath and Midget are slurs for people with gigantism or dwarfism, respectively, or even people without these conditions who may be atypically tall or short. In the game, Psychos and Lunatics shout in unintelligible phrases, run towards the player frantically, and blow themselves up to hurt the player, whereas Goliaths and Midgets mainly use their respective sizes to combat the player. The cover art for Borderlands 2 itself shows one of the Psychos miming shooting themselves in the head. At times, the developers attempt to deploy these labels and the behaviors for joke. For example, players may encounter “Shotgun Midgets” who knock themselves over while firing their weapons and then wriggle on their backs as they struggle to rise to their feet. Much of the joke here, of course, is at the expense of the NPC’s disability since other NPCs not labeled “Midget” do not have the same animation. The slurs and their accompanying visual rhetoric dehumanizes these common human antagonists through their disabilities. The slurs exist in tension with how the game presents disability as a social construct. One could argue that the
context of Pandora, where disability is omnipresent, complicates these stereotypes, especially since Midgets, Goliaths, Psychos, and Lunatics are not just common antagonists, but also common friendly NPCs as well. However, the complicated and problematic history of the slurs is difficult to overcome in a single game, especially when the visuals associated with these characters reifies existing stereotypes.

CONCLUSIONS
Despite participating in some harmful stereotypes about the disabled, Borderlands 2 occupies a relatively unique position as a representation of the social model of disability. By enabling player agency to an extent that is typical in most FPS, Borderlands 2 positions disability not so much as a boundary on human agency but instead as a difference in human visuals. This representation, of course, has its limits as a metaphor for the world outside the game, as it by necessity simplifies the complexity of disability to fit within the fictionalized space of the game. Nevertheless, Borderlands 2 does show how games can represent various kinds of bodies while still giving players freedom of action and the option to commit to the meaning of the game. We hope that games will take up this approach in the future and that the industry creating games can move away from primarily representing the disabled body as grotesque or an object of horror.

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