

Novigrad in the evening sun. *The Witcher 3: The Wild Hunt* (CD Project Red 2015)



Special Issue

Gamevironments of the Past.

by

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The Adventures of Ms. Meta: Developing a Historical Superhero Video Game

Sarah Zaidan

Abstract

The Adventures of Ms. Meta (forthc.) uses a combination of brawler and puzzle game mechanics along with the narrative device of time travel to provide players with the means to become active participants in the cultural narrative of the American superhero. Although these larger than life characters are irrefutably fixtures in contemporary popular culture, they exist in constant change; reinvented time after time in accordance with each era's definition of heroism, adapted as media forms evolve. As a game designer with a background in comic book illustration and superhero art history, this article explores my process of developing an experience that engages with the ever-changing relationship between superheroes and American culture. Players assume the role of Ms. Meta, a modern female superhero, in an adventure where every level represents a different age of superhero comics, and the world that produced them. Grounded in academic research, and featuring game mechanics including puzzle-solving and collaboration, I hope to empower players to create their own definition of heroism.

Keywords: superheroes, alternate history, representation, independent games, authenticity, intertextuality, video game history, game development, developer insights, agency

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Introduction

A mainstay of contemporary popular culture, the figure of the superhero has been inextricably linked to history and the cultural climate ever since the creation of *Superman* in 1939. For over seven decades, these larger-than-life characters have existed as part of the American cultural record; engaged in a dialogue with the world beyond the pages of a comic book, inspired by their creators' perceptions of heroism, informed by the weight of their own history and cultural importance. As a game



designer, artist, and superhero scholar, I am developing a video game that engages directly with this complex relationship. *The Adventures of Ms. Meta* uses a combination of brawler and puzzle game mechanics along with the narrative device of time travel to provide players with the means to become active participants in the cultural narrative of the American superhero. The following is an account of my intentions for *Ms. Meta*, from its narrative, game mechanics, and context. My process is guided by ongoing scholarly research, and takes inspiration from existing works in the fields of video games and comic books.

The Superhero as a Cultural Record of History

Superheroes are no strangers to scholarship. As these costumed crime-fighters have become increasingly ubiquitous in popular culture, their legitimacy as subjects of academic analysis has also grown over the past two decades. The history of the genre is a prevalent topic of study; as is the analysis of how the genre originated. The approach that superheroes are only the most recent iteration of the ancient mythic hero archetype, as Campbell (1988) and Reynolds (1992) have stated, stands in apparent contrast with the arguments of Fingeroth (2004) and Chambliss and Svitavsky (2013) that the genre represents the uniquely American narrative of immigration mixed with inspiration from serial stories of the era including pulp novels and radio plays.

In addition to where superheroes may have originated from, there is a wealth of material that explores where they have been and where they are headed. The essays collected by Wandtke (2007) and Ndalianis (2009) illuminate how these characters inhabit a cycle of reinvention and adaptation, instigated by the relationship between media and society, and the place superheroes occupy at the intersection of both spheres. The body of work written about superheroes is a significant and valuable resource for contributing to and enhancing the understanding of these figures'



cultural significance and impact across time in the popular consciousness.

When I look past the varying, sometimes conflicting, theoretical frameworks for studying the superhero, I see the emergence of common ground. The story of the superhero is one that speaks to American society, politics, and media; of aspirations and anxieties, with the theme of change a beating heart at its center. To paraphrase Foucault (2002), history is neither straightforward nor tidy, and the superhero genre, when viewed as a cultural record of a given time period, certainly reveals several pasts, several forms of connexion, several hierarchies of importance. As one era passes into another, superheroes change, the overarching meta-narrative that informs the structure of their stories changes, and in turn the ways in which superheroes act as agents of change in their world.

Proehl (2016) discusses the complicated space that superheroes occupy, and how their meaning transcends their individual narratives:

"There is a Captain America that exists outside of or above the stories written about him. He's a moral guidepost. He stands apart from the political fray: a version of an America that could be. He's better than all that. He's super... The superhero can serve as a symbolic protector or an avatar for personal strength. Some victims of violent crimes find solace and vicarious revenge in the stories of Batman. Characters like the Hulk or the X-Men can be touchstones for people struggling with mental health issues or discrimination."

The subject of superheroes has also been explored through the medium of comics themselves. Notable examples are Busiek and Ross's *Marvels* (2004), that presents pivotal events in the Marvel Universe from the 1940s to the 1970s from the perspective of an ordinary citizen. Its photorealistic art style imparts a sense of reality to the proceedings, and to the text. Gaiman and Kubert (2009) deconstruct and give equal validity to Batman's many reinventions by inviting readers to imagine the character existing in an endless cycle of death and rebirth.



The Adventures of Ms. Meta

On the surface, the game tells the story of Ms. Meta, an undergraduate engineering student who is the current protégé of MetaMan. Drawing inspiration from Marvel Comics' use of an alternate version of New York City in many of its comics, the game's levels take place in New York and its environs, albeit in a world where superheroes have been a fact of life since the late 1930s. Although by the time the game begins superheroes are an international phenomenon in this world, few have reached the iconic status of MetaMan, who is widely known as the first American superhero. Ms. Meta, however, is representative of a different generation of heroes: legacy characters. While superheroes have fought alongside youthful sidekicks since the Golden Age of the 1940s, the past decade has seen long-established characters pass their titles on or even share them with a diverse assortment of young people who want to follow in their footsteps without becoming their carbon copies. These characters bring different backgrounds, worldviews and experiences to their inuniverse actions, but also give readers a fresh perspective on the superhero genre. To translate the visual aspect of this individuality into the game world, future builds will implement a modular avatar creation system. This will include a variety of heights, body types, facial features and hairstyles for Ms. Meta; so that players can experience the game in the role of the superhero they have designed. The demo features a predesigned avatar, who I designed to intentionally speak to the variety the modular system will offer.





Figure 1. The pre-designed Ms. Meta sprite who is the demo's player character.

Balancing her duties as a superhero with her academic responsibilities makes Ms. Meta's daily life far from dull; the game begins as she trains with MetaMan before heading to a lecture; familiarizing players with both MetaMan's present-day personality and the game's combat mechanics. When a portable time-travel device created by her professor, the reformed Silver Age Supervillain Dr. Entropy, is stolen she leaps into action and into her toughest mission yet. Ms. Meta will have to bring all her skills and strength to bear in a time period vastly different from her own as she fights to prevent the fabric of reality from coming apart at the seams. Upon her arrival in 1942, Ms. Meta will discover her appearance has changed.





Figure 2. Concept art contrasting modern-day Ms. Meta with her 1942 redesign.

Regardless of her present day design, Ms. Meta of the Golden Age will sport a fashionable hairstyle of the time, a costume inspired by those of '40s pin-up girls, and a Caucasian skin tone. Before she can protest these changes, she will encounter her mentor MetaMan as she, as well as the player, has never seen him before.

Dressed in the colors of the American flag, MetaMan is about to join the war effort overseas. MetaMan recognizes and informs Ms. Meta that her powers are (apparently) the same as his: heroes whose appearance, conduct, and even their very being is informed by the dominant superhero meta-narrative of their time, whether they like it or not. As I add levels based on other time periods, the designs of MetaMan and of Ms. Meta ghg – at least initially, will continue to represent the era's archetypal image of the male and female superhero respectively. Although MetaMan is resigned to this – an indication this dedicated patriot has inhabited other roles in other times – he is



shocked to find that Ms. Meta is capable of shrugging off the onerous "Meta" obligations, and players will be given the option to assert their identity and restore their original character design from that point forward, or to accept their situation. As part of the player's opportunity for choice and decision-making, one of the options during NPC conversations will always be what a superhero of the time might have responded with, and players can choose to proceed through the level in this manner. Ms. Meta, by virtue of the recent comic book debuts of the legacy characters she represents, and by virtue of her being a video game character whose actions are decided by the player, has the agency to choose the form her heroism takes. MetaMan, however, is unable to do the same, after more than seven decades of reinvention and with the weight of his status as a cultural icon confining him to his role as the embodiment of the All-American Hero.

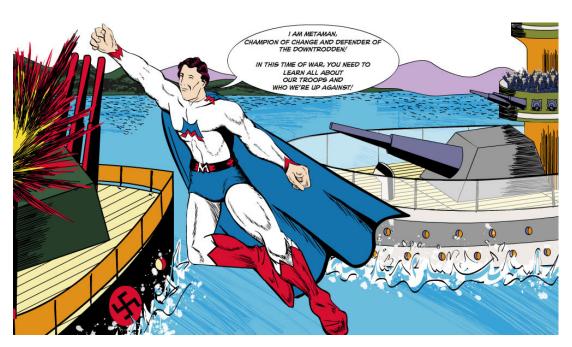


Figure 3. An image of the 1940s hub featuring a patriotic MetaMan during WWII.





Figure 4. The 1960s science-based origin story for a new iteration of MetaMan.

Many of *Ms. Meta's* aesthetic qualities and thematic concepts grew out of my doctoral dissertation, where I explored the visual and cultural representation of male superheroes from the 1940s to the present day. Through a series of interactive scenes



built in Adobe Flash, I charted the history of MetaMan, a character I created to be an amalgam of each era's most iconic superheroes. Dijects and characters in the scenes provided information on MetaMan's world, and what would have been the average American reader's world at that point in history.

Although the project encouraged users to draw parallels between the fictional history of superheroes and the authentic history informing it, users had no meaningful control or agency over its content. Information was presented to the user without providing them with the tools to respond. The present accessibility of game-making platforms has enabled me to evolve the project in a new direction, one that encompasses the superhero genre in all its complexity and includes game mechanics, an overarching story and – most crucially – player agency.

At the time of writing, *Ms. Meta* is still in development, with a playable demo slated for release in February 2017. Although this article focuses primarily on the demo, I will briefly include plans for levels and features I intend to implement in future builds where appropriate. The game is being made in Unity version 5.0, with 2D graphics, hand drawn sprites, assets, and backgrounds. Time travel is a frequently used plot device in superhero stories, iii and this is why I have chosen to use it in *Ms. Meta*, albeit contextualized within the game's storyline, I have chosen this particular way of giving the player access to multiple time periods for several reasons. Time travel offers an experience reminiscent of superhero stories featured across the media landscape, but it also draws specific attention to the societal and cultural factors behind superheroes' characteristics in each era, and is a design choice I hope will encourage critical reflection in players through counteracting historical assumptions with historical authenticity. It also enables what is frequently the inevitable conclusion of playing with the past (and is ideally suited video games' allowances for multiple story paths and endings): the creation of alternate timelines. Over the course of the



game, players will become active participants in the past while shaping the future. To demonstrate proof of this concept, the demo will contain one complete storyline with three possible endings, beginning with a tutorial level that is set in the present day and familiarizes players with the game's inputs. The player is then transported to 1942, where a full level will take place, after which the player returns to the present for a short epilogue which is determined by their actions in the past. I chose these two particular time periods in order to showcase the unmistakable stylistic differences between a medium in its nascence and that same medium after seven decades of evolution and innovation. In addition to proof of concept for the game's mechanics and art direction, I intend for the demo to introduce players to Ms. Meta's city, and the friends, foes, and ordinary citizens who populate it.

As this project combines video games and superhero comic books, I am taking a dualistic approach to my research and development. My decisions are informed by the unique qualities of each medium, their histories, and the parallels and overlaps that emerge between them. As players learn the actions needed to progress within the game system, gameplay creates narrative independent of any pre-designed story (Salen and Zimmerman, Anthropy and Clark). Visuals, meanwhile, have connections to both gameplay and story, facilitating level navigation, existing alongside the mechanics, and communicating pertinent information to the player about the game world.

On Creating Meaning through Superheroes and Intertextuality

In the words of Huizinga (1971), "all play means something." I am deliberately designing the game to maximize player agency through meaningful play, working from the definition Salen and Zimmerman provide in their seminal *Rules of Play* (2004). Meaningful play is described as "the goal of successful game design," (2004, 33) where meaning emerges from the relationship between players' actions and their



outcomes within the game. If the system does not respond to players' in-game decisions with discernible feedback, the relationship between the action and its result is stripped of meaning. However, if the game system fails to integrate the outcome with the larger context of the game, players are left anticipating a meaningful response that is never fully realized (Salen and Zimmerman 2004, 35).

The nature of video games has the potential to add a dimension to this existing body of work that text alone cannot provide, as Gee (2007) explains:

"Plato in the *Phaedrus* famously complained that books were passive in the sense that you cannot get them to talk back to you in a real dialogue the way a person can in a face-to-face encounter. Games do talk back. In fact, nothing happens until a player acts and makes decisions."

Superheroes are informed by the era/creative team they date back to, but I am giving the player the agency to have a hand in that process also. For example, before its closure in late 2012, iv the MMO City of Heroes (2004) featured a robust character creation system where players could customize their characters' costumes, powers and even write a unique backstory. The game's setting corresponded to a contemporary city, but its storyline took its cues from well-established superhero comic conventions to create a sense of timelessness. The ability to develop a character's personality through dialogue options is effectively demonstrated in the context of the superhero genre in Batman – The Telltale Series (2016). Each episode is fueled by choice, from the timed conversations that determine Bruce Wayne's behavior in a series of events that increasingly place him at the source of controversy and scandal, to the crime scene investigations and their subsequent reconstructions that are dependent on connections left up to the player to form, to the precisionbased combat mechanics, and strategic pre-planning of the first episode's climactic battle. Although the player's choices conclude each episode with a single ending, the journey to reach it is filled with a variety of ways for players to make their individual



experiences as Batman unique. As the series continues, I will certainly count *Batman*– *The Telltale Series* among my inspirations for giving weight to *Ms. Meta*'s conversation mechanics, as well as the social obstacles players will face.

The *InFAMOUS* (2009-2015) series engages with the issue of a superhero's impact on their community, albeit in a world where super powers are hated and feared. This aspect of the universe adds a heightened sense of stakes to the game's morality system. Sucker Punch Productions' creation of a Native American main character, as well as setting the game in contemporary Seattle, remain innovative design choices as well. A particularly inspirational game for *Ms. Meta*'s development is *Valiant Hearts: The Great War* (2014). Its successful integration of history with engaging and meaningful gameplay presents the human cost of World War I, in addition to its use of comic book style visuals. *Valiant Hearts* is an example of optional intertextuality in that it requires no prior familiarity with World War I on the part of the player. In addition, its playable characters represent a diverse collection of experiences and nationalities in a manner that is organic and supported by its moving storyline.

On Genre: Contextualizing the Side-scrolling Brawler

I have deliberately designed the movement and combat mechanics of *Ms. Meta* to resemble those of side-scrolling brawlers, a genre that dominated the arcade scene of the late 1980s thanks to games like *Double Dragon* (1987) and *Final Fight* (1989). This section explores the rationale behind my decision, my analysis of the brawler genre through the lens of its connection to superhero-themed video games, and how this analysis has influenced the development of *Ms. Meta* in ways that extend far beyond the game's core mechanics and into elements including story, art, and level design.



Early Game Design

Thematically and mechanically, brawlers owe a great deal to Hong Kong action cinema of the 1970s and 1980s. The primary goal of these films was to showcase the martial arts prowess of their lead performers, such as Bruce Lee, whose film *Enter the Dragon* served as a primary inspiration for *Double Dragon* (Leone 2012), and Jackie Chan by pitting them against a large groups of enemy characters, who they dispatched through a combination of quick thinking and consummate skill. Often cast in the role of a rescuer or an avenger, these action heroes fought their battles against the landscape of Hong Kong, using the environment itself as a weapon, even as they favored hand to hand combat (Miller 2015).

All of these elements are present in classic brawlers, from the deluge of enemies to the urban settings and plotlines rooted in revenge. With enemies bearing down on players from both sides of the screen, or even leaping down from above or bursting out of walls in the background, brawlers achieve a palpable sense of tension and suspense. The ability to move freely along the X, Y, and Z axes, intuitive controls translating on-screen into a wide array of flashy martial arts moves, and the option for cooperative play (usually 2 to 4 players) proved to be a winning combination that coincided with the resurgence of the superhero genre in popular culture. The critical success of *Superman* (1978) left a lasting imprint on the landscape of mass media (Tye 2012, 191) by reestablishing superhero figures as mass media juggernauts, and introducing the character to a new generation--one whose definition of mass media now included video games.^v

Unsurprisingly, the 1980s saw a variety of tie-in video games starring the Man of Steel, but Taito Corporation's 1988 arcade game *Superman* was the first to apply brawler mechanics to the superhero genre. In Taito's *Superman* movement along the Z-axis combines with the character's power of flight, giving levels more verticality



than the average brawler. The co-op element is present, albeit via the narratively clumsy choice of a red-clad Superman who no context is given for in-game. Later games like Data East's *Captain America and the Avengers* (1991) and Konami's *X-Men* (1992) would utilize the ensemble casts of their source material by enabling players to choose from a selection of each superhero team's members. The practice continued well into the mid-1990s, coinciding with the boom superhero comics experienced at this time^{vi}, and characters from *Spider-Man* to the *Teenage Mutant Ninja Turtles* received the brawler treatment.^{vii}

Mechanics and Meaning

In brawlers, meaning is created through challenge. As the player – always heavily outnumbered – fights back, they gain mastery over the combat mechanics and learn how to move along all three axes strategically. With each enemy they dispatch, the player receives discernible feedback that their actions matter, and are in fact the only thing standing between them and certain defeat. The player also gains a sense of accomplishment followed by excitement as they advance to the next screen, only able to guess (at least on their first play-through) at what types of enemies await them next. The degree of difficulty gradually escalates throughout each level, layering increasingly challenging combinations of enemy types such as hand to hand combatants with ranged attackers until the level culminates in a boss fight. Brawler bosses severely outclass the player in terms of hit points and damage dealt, and are often physically larger and faster as well. Victory can only be attained through a combination of quick thinking and quicker reflexes, as the player completes the game with the same amount of hit points they started out with. So far, the gameplay of brawlers creates a narrative of perseverance in the face of impossible odds. This narrative is paralleled within the superhero genre – impossible odds, after all, test the limits of these characters' superhuman abilities, and have been a fixture of superhero meta-narratives since the genre's beginnings. This sense of dramatic tension and



uncertainty is perfectly in keeping with my intentions for *Ms. Meta*; the player may be in the role of a superhero, but that alone will not guarantee their success.

An urban setting is also fitting when applied to the theme of superheroes. However, the treatment of the urban setting and the evil forces that have beset it can appear at odds with a superhero theme. In the average brawler destroying public property is treated as advantageous, even desirable, for the player, as these objects yield useful healing items or weapons. In the player's hands, trash cans and oil drums are capable of knocking over groups of enemies in one throw. By the end of the game, the player will have mowed down hundreds of enemy characters, who vanish from the screen once their health is depleted, emphasizing their inconsequentiality to the overall narrative. This rampant destruction of public property, while clearly a nod to the Hong Kong action film roots of the brawler genre, as are the piles of enemies left in the hero's wake, creates a different sort of meaning when players take on the role of superheroes. In Marco Arnaudo's analysis of the ethical code that governs superheroes' behavior, he observes that in the present day, these characters "may never kill, for any reason or under any circumstances, not even for legitimate defense, by failure to rescue, or 'for the greater good'" (Arnaudo 2010, 78). Arnaudo traces the origins of this rule to reveal that superheroes of the late 1930s and early 1940s had no compunctions over the deaths of villains, a sign of the influence hard-boiled pulp novel heroes like The Shadow and Doc Savage, the Man of Bronze had on the genre before its narrative voice was fully formed (Fingeroth 2004, 40).

The Application of Non-violence as a Mechanic

It was after the 1954 establishment of the Comics Code Authority that violence in comic books was all but eliminated, viii but by the Silver Age of the 1960s, "the no-kill policy...[went] from a restriction to an openly represented and debated topic, as it is today for the vast majority of Marvel and DC heroes" (Arnaudo 2013, 79). This led me



to question how and if the no-kill policy was represented in superhero-themed brawlers, when traditional brawlers require the player to fall into a rhythm of consistently and casually killing enemies in order to progress. As is often the case with video games whose release predated the Internet, and whose success did not reach the heights of iconic titles of the day, insights on the technology used are easy to uncover; insights from the developers less so, including what guidelines they were given by Marvel or DC Comics on how to represent their characters. In the following examples, I am treating the games as sources of inspiration for how I might approach the design of *Ms. Meta*'s adversaries, levels, and the player's interactions with the game world, concluding with an exploration of how these insights will inform the development of *Ms. Meta*.

In *Superman*, defeated enemy sprites transform into glowing outlines that immediately move off-screen at high speed, leaving their fate ambiguous. This iteration of Superman also had no aversion to kicking his way through trash cans, fire hydrants, fences, and the occasional telephone booth. *Spider-Man* (1991) translates the title character's wall-crawling abilities into innovative platforming mechanics within what is otherwise a conventional brawler (albeit with a marked lack of property damage on the part of Spider-Man). Enemies are universally human, and flicker and vanish in the classic brawler death animation. *Spider-Man*'s levels conclude by tallying up of all the enemy types that have been killed so far. The amount of kills adds proportionate bonus points to the player's overall score and is accompanied by a declaration of "awesome!" from Spidey himself. This feedback is certainly meaningful for the player from a gameplay standpoint, but the scoring system stands out as a game design choice in direct conflict with Spider-Man's personality.

Captain American and the Avengers directly addresses the potential disconnect between brawler game mechanics and superheroes' moral code with exclusively



robot enemies, the exception being the licensed supervillains who appear as bosses. After each boss battle, these characters are shown in a defeated pose as the screen fades to black, followed by cutscenes that clearly state with both text and image that the boss has survived. However, when The Avengers give chase to the forces of villain Red Skull in the third level, they leave their city devastated by the giant robot boss of the second level without a second thought. X-Men also features a largely robotic cadre of enemies, and avoids the issue of property damage as collateral by beginning the first level with the city having already been destroyed prior to the X-Men's arrival. Given the time period, the fate of these cities is commonplace; the collateral damage caused by the conflicts of larger than life heroes and villains is an aspect of the genre that was largely taken for granted during the 1990s. Superhero media of the 21st century, however, has been addressing this topic directly, resulting in a new metanarrative. The central conflict of recent films including Batman v Superman: Dawn of Justice (2016) and Captain America: Civil War (2016) is initiated by how inadvertently destructive superheroes can be, and how the enormous power they wield can disconnect them from the very communities they serve, causing them to be viewed with distrust and animosity.

I have translated this meta-narrative and sense of accountability into the gameplay in a deliberate subversion of classic brawler mechanics: Ms. Meta will be able to manipulate the environment and make tactical use of her surroundings, but cannot personally destroy them. This is not to say her attitude is a universal one. Property damage will certainly occur at the hands of other characters—not all of them enemies, and not always intentionally, but Ms. Meta's role will be one of intentionally preventing and mitigating destruction rather than personally contributing to it. I have contextualized these gameplay elements through the demo's plot; one of the game's main characters, Steel Dart, is a robotics expert who has dispatched their army of robots to the past in order to preemptively prevent a terrorist attack that occurred



that very day in 1942. The identity of the attacker remains unknown, and Steel Dart, used to remotely controlling their metal minions via wireless contact, has no distance command over the hostile metal behemoths flooding the attack site and its surrounding environs. The character believes fully that in this case, the ends justify the means and any collateral damage the robots may cause is negligible by comparison to the evil act they are trying to stop. This aspect of the plot ensures that enemy robots of assorted sizes, speeds and attack patterns will be in plentiful supply.

The next step in the design process was determining what would happen when the player is defeated. In traditional brawlers, players who choose to continue the game resume instantaneously from the screen where their character ran out of health. This approach is a valid one for Ms. Meta as long as level progression is determined by combat alone. This does not apply to the game in its entirety. Brawlers excel at providing an action-packed experience of continuous movement through the game world towards a single goal, but Ms. Meta's levels are designed to provide other methods of interacting with the game world apart from violence. Brawler mechanics were not initially intended to accommodate the sorts of challenges the player will encounter in the game, such as navigating social interactions, and uncovering the identity of a would-be terrorist before they can strike. The non-combative elements of the game will impact how the level is experienced moment to moment, as well as provide opportunities for the player to shape the personality of the Ms. Meta character. To maintain visual cohesion throughout the game, and reduce the feeling that conversations are a separate mode of play, they will occur in the form of classic comic book speech bubbles that will not alter the existing game view. When presented with a choice, the player will have up to four dialogue options, which will appear above Ms. Meta's head as comic book convention of cloud-edged bubbles denoting thoughts. When the player selects their response, its outline will be replaced with a conventional speech bubble to indicate Ms. Meta has spoken the line



aloud.

These social interactions exist in part so that the player may uncover alternate paths for navigating a level – such as finding a way over a police blockade set up on account of the aforementioned giant robots by taking to the rooftops, but they also afforded me an avenue to integrate conversation and combat. One of the greatest strengths of brawler gameplay is the allowance for multiple players cooperating toward a unified goal. While Ms. Meta does not support cooperative play at this stage, the player's decisions throughout the game will determine whether or not a selection of NPCs, including fellow superheroes and ordinary citizens, will assist the player during boss battles. Involvement will range from distracting the boss so that the player gains a momentary advantage, to super powered team-ups. It will also be possible for two of the NPCs native to 1942, a society journalist and a munitions factory worker; to help the player gain access to particular characters and locations that would otherwise be unavailable. Proactive NPC participation is intended to provide players with a feedback metric for the conversation mechanic, and add to the player's experience that their decisions are impactful in ways both large and small, with the goal of maximizing meaningful player engagement with the NPCs as well as the game itself. The game will also feature visual feedback whenever the player's actions alter the timeline, but the nature of these changes will not be revealed after the level is complete.

Level design and Visual Narrative

Historical Research and Plotlines

The plotlines of each level are based on stories that are common to the time period in question. In the present day tutorial level, Dr. Entropy's time machine is stolen by teenage robotics prodigy Steel Dart, who longs to change the past to give their



generation a more stable future, tapping into the frustration felt by American youth in a time of tremendous societal tension and economic uncertainty for their generation. Recent superhero comics have reflected these cultural anxieties with storylines such as ordinary teenagers voluntarily becoming human batteries in the belief they are giving back to society as an alternative to fossil fuels (Wilson, Alphona, and Wyatt 2015), and an evil sorceress recruiting super-powered twenty-somethings to her cause with promises of magically eliminating their student loans or improving their credit score (Leth, Williams, and Allegri 2016). These young people are not treated in a patronizing manner by their comics' narratives, which acknowledge the validity of their fears while making it clear to the reader that villainy or self-defeat are not catalysts for positive change.

The level set in 1942 is inspired by a particularly prevalent type of story featured in comics of World War II: superheroes thwarting the plans of a Nazi saboteur. The Golden Age of superhero comics is famous for "supporting the myths of American superiority and the enemy's inferiority, and depicting imminent victory" (Strömberg 2010, 42). This period of history is also famous for its simplistic representations of war, and overtly stereotypical portrayal of the Axis powers. Strömberg presents the argument that "comics writers were [...] responding to the angry mood of the American people, and comic books became more hate-filled" as the war went on (2010, 42), as embodied in the powerful image of Captain America punching Hitler even before the United States had entered World War II (Simon, Kirby 1940). However, Ms. Meta's cast of characters may appear in a 2D game, but it is not my intent to give them two-dimensional portrayals. A game system is a simulation, and I am not designing a system to simulate the experience of being a character in the world depicted within superhero comic at various points in America's history. Instead, the game will offer the experience of being a superhero within the society that produced these comic books, albeit in a capacity limited by the scope of the game. Superhero



NPCs are based initially on existing archetypes of the genre, and the Nazi saboteur is not designed to be a sympathetic character, but they, along with citizen NPCs the player will encounter, will have their own unique personalities, backgrounds, relationships and motivations. In an effort to move away from stereotyping, and from regarding media forms of the era as an authentic depiction of history, this aspect of Ms. Meta's development relies heavily on sociohistorical research. I cannot presume to speak for characters whose experiences and identities are vastly different than my own, and will be beta-testing the game's script with input from focus groups, a process my co-creators of the intertextual superhero comic series My So-Called Secret *Identity* and I have found beneficial for avoiding stereotypes and representations informed by bias. In the case of characters from the past, I have turned to archival material including letters, interviews, and periodicals to source out authentic voices, determine cultural context, and understand the social roles and structures of the relevant time period in a critical manner. My research has inspired me to create a middle-aged journalist character based in part on author Ann Batchelder, behind whose idiosyncratic writing style dwelled a background in women's suffrage, law, and cartography, and a young African-American factory worker inspired by women like Juanita E. Gray and Annie Tabor whose contributions to their county have been largely erased by the wider cultural narrative (Smith 1943, Rosener 1942). Katherine Isbister points out how social roles "are useful to keep in mind when designing NPCs because social roles shape a person's expectations about how he or she will relate to others [...] Imbuing an NPC with seeming awareness of role expectations will enhance the NPC's lifelike qualities for the player tremendously" (2006, 227). In levels representing the past, players will be confronted with subtle differences in NPC dialogue and interactions than what they will encounter in the present day, signifying a different time and place, with different social roles.



Aesthetics and Visual Cues

NPC interaction may be optional in many cases, but the player will be constantly interacting with the game's visual aspects. Each level's art is designed to form a connection in the player's mind with superhero comics of the corresponding era. I began this process in an intertextual manner by exploring the visual elements of superhero comics from the past and present. In the present day, superhero comics have begun to move away from the fixed parameters of a "house style", with many recent titles demonstrating a wide range of unique artistic approaches. There are some defined areas of commonality across an assortment of recent superhero comics: saturated color palettes (Stewart, Fletcher, and Tarr 2015, Leth, Williams, and Allegri 2016), applications of color reminiscent of watercolor painting techniques, often lushly shaded and textured (Stewart, Fletcher, and Tarr 2015, Wilson and Alphona 2014), inked outlines that are frequently loose and sketch-like (Stewart, Fletcher, and Tarr 2015, Fraction et al. 2013), and significant attention paid to environment and clothing details. With this assessment in mind, I am designing a bright, colorful, and plausible game space, reflective of a visual medium that is entering a new stage of its evolution; one that celebrates individual self-expression.

Superhero comics of the 1940s had a more uniformly identifiable style. They employed clear, often thick outlines, and cross-hatching techniques alongside areas of solid black to convey shadow. The color palette placed heavy emphasis on red, green, yellow and orange, often resulting in an excess of non-local color. When designing the look of 1942, I have turned to some the Golden Age's most famous characters for guidance. Joe Shuster's drawings of Superman, square-jawed and barrel-chested, established the visual conventions of what was soon to become a wildly popular genre (Siegel and Shuster 1938). Jack Kirby's cover illustration of Captain America punching Hitler in the jaw remains one of the era's most iconic images (Simon and Kirby 1940). Wonder Woman made her debut in 1941 drawn by



magazine illustrator Harry G. Peter, and has continuously remained the world's most famous female superhero ever since (Lepore 2014). Through an amalgam of these three artists' styles, I am creating assets that reflect a nascent medium that still retains a high artistic quality.

Ms. Meta's story provides context for its gameplay, its visuals communicate the components of the game that result in gameplay, but its levels are "the structures within which the players will experience the gameplay" (Fullerton 2008, 362).

Locations are inspired by existing sites in the real-world New York City including Columbia University, the Brooklyn Naval Yard, and a munitions factory. Although these environments are meant to be regarded as representations and not replications, I am designing each environment based on research into the architecture and visual culture of the time in service of creating locations that reflect the cultural identity of the time. To create the sense that the game takes place across a single city, some environments are directly connected to one another, while others require the player to travel further afield, and to reflect the game's themes of agency and choice, players will be able to navigate the world of Ms. Meta by moving from right to left, down to up and up to down, in addition to the classic brawler movement style of left to right. Levels allow the player freedom to explore, but are also designed to be functional, within the contexts of gameplay and a space's intended purpose.

Valiant Hearts has been a valuable source of inspiration in this regard; its levels are designed with gameplay as their clear priority, but also make sense when examined from a story perspective. Of particular note is the besieged city of Reims where the player navigates a series of ruined buildings to rescue trapped civilians. This portion of the level is an obvious puzzle, with ladders to be climbed, platforms to be lowered into place, and switches to be flipped, but through thoughtful and layout design and intentional placement of assets such as fireplaces and armoires, the environment



consistently communicates to the player that these were once functional homes.

Valiant Hearts lacks movement along the Z-axis, but possesses an innovative visual treatment of depth. Throughout the Ms. Meta demo, the player will be traversing similar urban environments that reflect New York City's grid-based urban planning. To convey the sense that the environment has depth on multiple planes beyond the player's immediate location, I will be incorporating parallaxing backgrounds. This is a design choice that impacts atmosphere rather than gameplay, but I am also planning to use environments to act as collaborators with the gameplay and story. For example, during the first combat sequence of the tutorial level, the player must move from one end of a low-ceilinged corridor to the other as a stream of Dart Drones (small but deadly melee and ranged robots) try to impede their progression. During this sequence of events, the characters Max Entropy and Steel Dart are visible through the corridor's gallery of windows engage in aerial combat. The confined space and inability to assist Max is designed to impart a sense of pressure and urgency. The next section of the tutorial takes place in a grand library space, where the player's goal is to reach the roof. With the central staircase in pieces thanks to an errant shot from a Dart Drone, the player must find alternate methods to move consistently upward. The vertical nature of this environment hides much of the level information from the player, and serves as a parallel to the story, where the conflict and tension build to a crescendo in time with the player's arrival to the roof.

As a game designer, I "rely on the use of indirect control to guide people into having the right kind of experience" as Schell (2008, 330) counsels. Level design produces the spaces where a great deal of this guidance takes place, and as such, it is as integral a component of enabling player agency as the mechanics, gameplay, and story.



Summary and Future Challenges

The superhero genre provides a rich history and cultural record that has guided me as I develop *The Adventures of Ms. Meta*. The design process has been characterized by intertextuality, much like the source material from which I have drawn inspiration. With *Ms. Meta*, I am creating a game that both celebrates and intervenes with side-scrolling brawlers. Using this classic video game genre as a framework, I am enabling player agency within the context of a fighting game. The overall game system I am designing promotes meaningful engagement with the cultural narrative of superheroes through a combination of combat, dialogue, and puzzles, and with thoughtful treatment of the player's environment. My decision to include time travel as well as time alteration as game mechanics empower players to create meaning through immersion in an era of American history that produced many superhero characters who defined the genre for decades to come.

Based on the amount of content I have already removed or distilled, I am mindful of a tendency to over-scope. Depth of gameplay over breadth of content and level size is a more beneficial approach to the project overall. As I look forward to the next stage of development, it is clear that beta testing the demo among playtesters who represent a variety of backgrounds will be critical for evaluating the game's accessibility, meaningful play, and the success of its combination of game mechanics. This feedback will provide a concrete evaluation that I have facilitated a meaningful dialogue between the player, superheroes, and the society that led to their creation and establishment as an indelible part of American popular culture.

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ⁱ Examples of notable legacy characters include Miles Morales as Spider-Man, Kamala Khan as Ms. Marvel, Kate Bishop as Hawkeye, and Kenan Kong as Superman.

ⁱⁱ I designed the name 'MetaMan' (styled as one word to avoid confusion with the minor character 'Meta Man' from Pixar's *The Incredibles* (2004)) to connote metamorphosis as well as the definition of 'meta' as a self-referential work that breaks the 'fourth wall' between a itself and its audience.

The X-Men series is renowned for its use of time-travel plotlines, particularly the "Days of Future Past" story arc written by Chris Claremont and John Byrne that featured in *Uncanny X-Men #141-142* (1981), the events of which inspired a film adaptation directed by Brian Singer in 2014.

iv On City of Heroes' Closure, see

http://www.gamasutra.com/view/feature/189896/behind_the_scenes_of_the_paragon_.php.

^v Superman was followed by four direct sequels, and it was not long after before fellow DC superhero Batman made his feature film appearance in 1989, establishing superheroes as a film genre in a trend that arguably remains unbroken.

vi The superhero comic bubble burst in the late 1990s, coincidentally around the same time that the demand for 3D graphics led to the phasing out of the arcade brawler.

vii The brawler treatment was not restricted to martial arts or superhero themes. Golden Axe featured a setting Conan the Barbarian would have felt right at home in, and even The Simpsons took on Mr. Burns on a brawler adventure of their own.

According to Part A, Article 7 of the Comics Code of 1954, "scenes of excessive violence shall be prohibited." The code guidelines in their entirety can be found on the website of the Comic Book Legal Defense Fund, http://cbldf.org.

ix Given Clark Kent's use of phone booths as a changing room, my association between "Superman" and "telephone booth" is not "kick it until it explodes"!

^x *Double Dragon*, in addition to being the first game of its kind to introduce co-op play, also introduces a plot twist when it turns its two-player mode into a death match with both players competing for their mutual love interest after the final boss has been defeated.

xi Jim Steranko laments the limited use of color in the medium's infancy, as Chiarello and Klein (2004, 8) state: "Early "craftsmen" painted men's suits green and orange (so readers could easily keep track of characters), never dreaming that color could be used to help build narrative sequences, shift attention from one panel to another, punch up dramatic beats...".