4   Game comics

Theory and design

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Comics and videogames have a shared history of visual influence and narrative crossover. Today, portable display devices such as tablet computers and smartphones provide common platforms of consumption on which comics and videogames are equally at home. Within this context, this chapter explores the potential for hybridization between the form of comics and the ludic qualities of videogames. Such hybrids can be described as "game comics." A game comic is a type of hypercomic that exhibits some of the key characteristics of a game and uses some of the key characteristics of the form of comics as the basis for its gameplay. In seeking to analyze the operation of the game comics format, it is necessary to draw on a range of ideas from comics, game, and media theory.

This chapter begins with an examination of the different types of visual and narrative crossover that have developed between comics and videogames. It identifies the key characteristics of games and considers the potential interplay of these characteristics with those of the form of comics. This leads into an extended analysis of three game comic prototypes that were created as a practice-based inquiry into the potential of the format: the smartphone app *A Duck Has an Adventure* (2012), the browser game *Icarus Needs* (2013), and the unpublished work *Margaret Must Succeed* (2013). These three major case studies provide the basis for a critically grounded exploration and analysis of how the form of comics can be adapted via hybridization with the ludic qualities of the videogame.

Videogames and comics

Videogames have their origins in the middle of the twentieth century, with the game *Spacewar!* (1961) often cited as the first fully-fledged example of the form (Juul 2005, 3). As videogames have developed as a form, they have also developed a shared history of visual influence and narrative crossover with the form of comics. Popular videogame franchises such as *Sonic the Hedgehog* (1991), *Resident Evil* (1996), or *World of Warcraft* (2004) regularly receive their own comic book adaptations and transmedia crossovers. Similarly, the adventures of comic book characters like Batman

and Spider-Man have been adapted across a multitude of successful games. Videogames and the videogame industry also serve as the backdrop for many widely read webcomic series, such as *Penny Arcade* (1998–) and *PVP* (1998–), with gaming at one time forming the single most popular genre in the emergent webcomic scene (Campbell 2006, 49).

The form of comics is at times used as a linking device within videogames themselves. In the third-person shooter *Max Payne* (2001) and the puzzle game *Angry Birds Space* (2012), rather than animated cut scenes between each level, the narrative is progressed using digital comics in page-like groupings of panels. In the case of *Angry Birds Space*, these groupings are built up on the screen one panel at a time using "panel delivery" techniques similar to those commonly found in other formats of digital comics (Goodbrey 2017, 68). Other games like *Comix Zone* (1995) and *Comic Jumper: The Adventures of Captain Smiley* (2010) adapt common visual tropes like panels, pages, and captions for use in the context of animated, side-scrolling beat 'em ups. This visual appropriation between comics and videogames has moved in both directions. Bryan Lee O'Malley's graphic novel series *Scott Pilgrim* (2004–2010) makes use of popular videogame tropes in its narrative, with its titular protagonist encountering save points, leveling up, and collecting coins from defeated enemies.

There have also been some videogames that use the form of comics more directly as part of their gameplay. For example, the superhero videogame *Redhawk* (1986) mixes the tropes of an adventure game with a dynamically updating comic strip. Similarly, there have been comic books that integrate aspects of gameplay into their narrative. The five-issue *2000 AD* spin-off series *Dice Man* (1986) combines comics with the game rules of the *Choose Your Own Adventure* book series. *Redhawk* and *Dice Man* are early examples of the hypercomics format. Hypercomics exhibit "a multicursal narrative structure" (Goodbrey 2017, 87) in which readers must make choices as to the path they take through the narrative. The nature of the hypercomic as a hybrid between the forms of comics and hypermedia makes it well suited to further hybridization with the ludic qualities of videogames.

Hybridizing comics and games

To examine the hybrid game comics format, it is important to first consider some of the fundamental concepts that underlie games and comics. Juul provides a useful analysis of a range of different definitions of games and from these identifies six key characteristics of the form. These are:

1. *Rules*: Games are rule-based.
2. *Variable, quantifiable outcome*: Games have variable, quantifiable outcomes.
3. *Valorization of outcome*: The different potential outcomes of the game are assigned different values, some positive and some negative.

4. *Player effort*: The player exerts effort in order to influence the outcome. (Games are challenging.)
5. *Player attached to outcome*: The player is emotionally attached to the outcome of the game in the sense that a player will be a winner and "happy" in case of a positive outcome, but a loser and "unhappy" in case of a negative outcome.
6. *Negotiable consequences*: The same game [set of rules] can be played with or without real-life consequences. (2005, 36)

While many games exhibit all six of these criteria, Juul's model also allows for tertiary cases that share most, but not all, of the key characteristics. In addition to the above, Juul offers a useful division of games into two major categories. Games of emergence are "the primordial game structure" (Juul 2005, 73) in which a game consists of a small number of rules that combine to create a large number of different variations of play. In contrast, games of progression are "the historically newer structure that entered the computer game through the adventure genre" (Juul 2005, 72). Now common to many modern videogames, players in games of progression must perform predefined sequences of actions in order to progress through the game.

Juul's approach to establishing and analyzing the characteristics of games inspired my own approach to creating a model of the key characteristics of the form of comics. In the study of comics there has been some debate as to the nature and relative importance of the various characteristics of the form (Groensteen 2007; Hatfield 2009; McCloud 1993; Miodrag 2013). Through a process of critical analysis and synthesis I developed a model consisting of seven key characteristics that can be summarized as follows:

1. *Space as time*. Comics use arrangements of images in space to represent arrangements of moments or events in time.
2. *Simultaneous juxtaposition of images*. Comics place images in spatial juxtaposition to each other, such that two or more images may be viewed simultaneously by the reader.
3. *Closure between images*. The reader of a comic derives time, meaning, and motion out of sequences of static, juxtaposed images through the process of closure.
4. *Spatial networks*. Sequences of images form part of a larger spatial network of narrative and aesthetic interrelations that exists between all the elements in a comic.
5. *Reader control of pacing*. The pace at which the reader absorbs the information in a comic is controlled by the reader and determined by the pace at which they read and navigate the comic.
6. *Tablodic images*. The images in a comic exhibit qualities of the tableau, in that they are deliberately composed, framed, and illustrated to represent key moments of narrative meaning.

7. *Word and image blending*. Although sometimes wordless, comics typi-
    cally use a blend of words and images in spatial juxtaposition to convey
    meaning to the reader. (Goodbrey 2017, 162–163).

This model is intended to provide a conceptual division of the interconnected
and overlapping processes that are in operation when a comic is read.
It is not meant as an exhaustive list; not all comics will display all seven
characteristics. Different formats of print and digital comic can place each
characteristic into greater or lesser emphasis, and some examples will omit
certain characteristics completely.

As a hybrid of the two forms, a game comic should exhibit some of
the key characteristics of games and some of the key characteristics of the
form of comics. Many of the earlier examples of direct crossover between
comics and games fail to meet these criteria. Animated games like *Comix
Zone* and *Comic Jumper* do not qualify because although they adopt cer-
tain visual tropes, they ignore or replace too many of the key characteristics
of comics such as space as time, closure, and spatial networks. Similarly
excluded are games like *Max Payne* or *Angry Birds Space*, where comics
are used as a linking device; here the gameplay and comics sections are
kept completely separate from each other, and there is no opportunity for
true hybridization.

Most hypercomics can also be discounted as they do not display enough
of the key characteristics of games outlined by Juul. *Redhawk* and *Dice
Man* do meet the criteria of game comics, operating both as comics and as
games of progression. But in both cases, the mechanics of gameplay and the
characteristics of the form of comics remain relatively separate. In *Redhawk,*
the play is focused chiefly on interaction with the text parser, while the
comic strip is used to visualize the result of this interaction. In *Diceman*,
the *Choose Your Own Adventure* structure of play has been grafted on to
the spatial network of the comic, but interaction between the two systems
is limited.

During the process of practice-based research involved in the creation of
new game comic prototypes, my aim has been to achieve a more direct syn-
thesis between comics and videogames. The resulting game comics are not
just games that are also comics, but games that make specific use of some of
the key characteristics of the form of comics in the mechanics of their game-
play. In considering possible areas of crossover that could be conducive to
greater synthesis between comics and videogames, my starting point was the
use of space within the two forms.

Murray asserts that for some players, "videogames are about exploring an
infinitely expandable space" (1997, 129). Other media (Aarseth 2000) and
game theorists (Zagal et al. 2008) similarly assert that spatiality is a defining
element of the videogame. The exploration and manipulation of space in
videogames can form a fundamental part of gameplay, with the unlocking of
space serving as a key aspect of a game's reward structure (Gazzard 2011).

Similarly, comics are also an intrinsically spatial form. Arrangements of panels in space are used to represent the passage of fictional time, and these panels exist as part of a spatial network of interrelations. Spatiality therefore makes for a strong common thread around which to develop new game comics.

In creating the three prototypes discussed in this chapter, I elected to focus on making games of progression. As Gazzard asserts, "at the heart of this type of game lies the concept of exploration" (2013, 59). The exploration and unlocking of space therefore became a key element of gameplay during this practice-based inquiry. Juul (2005, 73) also notes that games of progression often harbor "storytelling ambitions" in their design. This makes the structure particularly sympathetic to the strengths of the form of comics, which is commonly used to convey narrative via the use of simultaneously juxtaposed tablodic images and word and image blending.

A Duck Has an Adventure

A Duck Has an Adventure is the first of the three prototypes created during my inquiry. The game is based on the structure of a branching narrative hypercomic. This structure takes its lead from the *Choose Your Own Adventure* book series, where the player must make choices for the central character that influence the direction of the narrative. As an initial attempt at creating a game comic, the intent behind the work was to create something that comics readers would view as a comic and videogame players would view as a videogame. The design of the comic builds on my existing body of work as a digital comics practitioner. As a result, this first prototype sits nearer the comics end of the game comics spectrum. *A Duck Has an Adventure* first went on sale as an app for Android smartphones and tablets in February 2012. Its original description on *Google Play* reads as follows: "A Duck has an Adventure is a unique hypercomic adventure game that challenges you to discover all the different possible lives one duck could live. From adventures on the high seas to the halls of academia and beyond, every choice you make builds a new pathway along which to explore" (Goodbrey 2012a, n.p.). The app received positive reviews and in March of 2012 peaked at number six in the top ten paid comics apps on *Google Play* (Goodbrey 2012b). Later that year in November, *A Duck Has an Adventure* was also selected as one of the seven shortlisted nominees in the *New Media Writing Prize* (2012). In May of 2013, a new version of *A Duck Has an Adventure* was launched that was designed to be played in a web browser. This version of the game was free to play, with revenue coming from adverts placed at the start of the game and on the hosting websites. It was made available via online game hosts such as *Kongregate, Armor Games*, and *Mochimedia*. This brought the work to the attention of a large gaming audience, and as of August 2016, the browser version of *A Duck Has an Adventure* has received over half a million plays on *Kongregate* alone. This has resulted in lots of direct feedback from

gamers, as well as several pages of reviews and playthroughs on *YouTube* (YouTube 2020a).

In both browser and app versions, *A Duck Has an Adventure* was designed with casual gaming audiences in mind. To target this audience, the game comic incorporates what Juul describes as "juiciness" (2010, 45), an excess of positive feedback that rewards the player for their interaction. One way *A Duck Has an Adventure* achieves this is through its use of animated panel delivery; when panels are tapped or new panels appear, they react and move with a satisfyingly elastic springing motion. Pursuit of juiciness also means encouraging regular interaction between the reader and the screen. A standard digital comic might require the reader to only interact with the screen when clicking or swiping to turn the page. But rather than being based around a digital recreation of a page, *A Duck Has an Adventure* uses an infinite canvas approach (McCloud 2000, 222), treating the screen as a window onto a much larger network of panels.

To navigate this network, the reader must regularly tap the screen to shift the focus of the window and make new panels appear. This places an emphasis on the reader's control over the pacing of the comic and establishes a regular rhythm of interaction, helping to ensure that "moving the character and/or object through the game space becomes habitual" for the player (Gazzard 2013, 99). For this habitual process to work successfully, the player has to be able to consume the information in each panel quickly before tapping to bring up the next in sequence. To help achieve this, the tablodic images in *A Duck Has an Adventure* follow the principle identified by McCloud as "amplification through simplification" (1993, 30). Narrative is conveyed by a combination of tersely worded captions and simple, icon-like images that can be quickly consumed and understood by the reader.

Gazzard notes that in a videogame, it is "often the feeling of discovery that keeps players within the playworld" (2013, 8). This sense of discovery is enhanced in *A Duck Has an Adventure* via the addition of two common gaming tropes: collectable hats that the player can find through exploration and an achievement system that rewards continued progress through the narrative. A scoring system is also provided that indicates the current number of hats, achievements, and endings that the player has discovered, as well as the total number of each to be found in the game. These scores provide a metric by which the player can measure how much of the game they have completed. Seeking completeness then becomes a game in itself, as the player tries to uncover all of the possible narrative pathways in order to collect every hat, achievement, and ending.

The addition of this completeness metric is a marked departure from my previous hypercomic work. In a typical hypercomic such as *The Formalist* (Goodbrey 2005) or *Four Derangements* (Goodbrey 2009), the reader may at times experience a sense of tmesis. This is the feeling that in choosing one path from the many potential narrative pathways, they may have skipped over or missed something important (Peacock 2005). Both *The Formalist*

and *Four Derangements* lack any indicators as to which paths have already been followed or how much of the comic might still remain unseen. In contrast, by quantifying the amount that has been seen and unseen, the tmesis in *A Duck Has an Adventure* is diminished and refocused to become an explicit problem for the player to solve.

Another way *A Duck Has an Adventure* differs from my previous hypercomic work is in how it makes use of the infinite canvas. In hypercomics like *Never Shoot the Chronopath* (Goodbrey 2007) and *Doodleflak* (Goodbrey 2002), the entire temporal map of the comic is laid out from the very beginning. With the whole spatial network of the comic already constructed on the screen before them, readers are free to zoom in and read the story at any point or zoom out to navigate between different sections of the narrative. However, in a game, this approach would be problematic. As Gazzard asserts, players "do not expect to have the full game world open to them; to do so would take away the exploratory and learning aspects of the game that the players need to keep playing" (2013, 103).

Accordingly, in *A Duck Has an Adventure*, players begin with only a single panel of the comic visible and then construct the temporal map themselves through their play. While *A Duck Has an Adventure* does offer the player the ability to zoom out and view the whole temporal map of the comic, in its initial design, this was not the case. The zooming feature was only added later in development as a result of player feedback. The portable nature of smartphone apps meant that early builds of *A Duck Has an Adventure* could easily be passed around amongst friends and colleagues in order to observe their interaction with the game. The qualitative feedback received through this process filled a similar role to playtesting in videogame design. Fullerton identifies playtesting as "the single most important activity a designer engages in," providing a vital way to "gain an insight into whether or not the game is achieving your player experience goals" (2008, 248).

The early feedback I received on *A Duck Has an Adventure* indeed proved invaluable, influencing several aspects of the game's design. The most common request amongst testers was for the addition of a zoomed out view of the comic's spatial network that would serve as a record of where they'd been and the choices they'd made in the game so far. Being able to see the current state of the whole temporal map aids not only in basic navigation, but also in identifying the unexplored pathways that are necessary to achieve full completion of the game. Using the map in this way "requires the player to memorize parts of it in order to remember another sequence of possible spatial events and [the map] becomes as much a part of the problem solving of the game as the navigation itself" (Gazzard 2013, 82).

In *A Duck Has an Adventure*, some of the final narrative paths needed to fully complete the game only become accessible once the player has visited the same event via two different pathways. Accordingly, the zoomed out view serves a vital function for those engaged in completeness-seeking gameplay.

The next section further considers this aspect of the game and examines it in contrast to the gameplay of the second of my game comic prototypes.

Icarus Needs

The second prototype, *Icarus Needs*, is influenced by both text-based interactive fiction games like *Zork* (1980) and graphic adventure games like *The Secret of Monkey Island* (1990). Montfort outlines some of the key characteristics of such games:

- A potential narrative, that is, a system that produces narrative during interaction;
- A simulation of an environment or world; and
- A structure of rules within which an outcome is sought, also known as a game. (2005, 23)

The narrative of *Icarus* concerns the plight of cartoonist Icarus Creeps, who has fallen asleep playing videogames and now finds himself stuck in a surreal, metafictional dream world. The intent with the game was to build on the lessons learned with *A Duck Has an Adventure* and to push toward something that felt more game-like in its nature. Given the success achieved by *A Duck Has an Adventure* as a browser game, *Icarus* was designed from the very beginning to take advantage of this distribution platform. It was released across multiple online game-hosting websites in July 2014. The game shared the success of its predecessor, receiving over half a million plays by August 2016 and generating similar amounts of player feedback via comment threads and *YouTube* (YouTube 2020b).

Montfort notes that a typical adventure game "simulates a world that the interactor is supposed to figure out" (2005, 21). He further asserts that much of the fun in an adventure game comes from the act of exploring the game world itself (Montfort 2005, 4). My goal with *Icarus* was to create a simulated world that the player could explore, interrogate, and solve via the form of comics. Unlike a normal comic, the narrative of *Icarus* is not laid out in advance for the reader to read through and absorb. Adventure games are not themselves narratives but "produce narratives when a person interacts with them" (Montfort 2005, 23). Accordingly in *Icarus*, the narrative is created via the player's exploration and interaction with the comics-mediated world presented in the game.

During the game the player has control over the character of Icarus Creeps and is able to move him around from panel to panel in order to interact with the other characters and objects found in the world. It is important to stress that this movement is achieved using only the characteristics of the form of comics. Readers always remain in control of the pace at which they absorb the information, and no animation is used at any point inside the panels of the comic. Instead, movements in time are represented through movements

in space and rely on the readers' use of closure to interpret the changes in the juxtaposed images that form the comic's spatial network.

To keep *Icarus* accessible for the casual player, I tried to simplify the gameplay mechanics as much as possible. Icarus Creeps is limited to carrying a single object at a time, and the player only controls the character's movement, with environmental interactions being triggered automatically on entering the appropriate panel. By collecting certain objects and applying them in the correct situation, the player is able to solve simple puzzles and progress further through the game. These puzzles form a key element of the narrative that unfolds in *Icarus*. Montfort highlights their importance to the adventure game genre, stating that "the puzzles in a work of interactive fiction function to control the revelation of the narrative; they are part of an interactive process that generates narrative" (2005, 3).

The player in *Icarus* is engaged in two simultaneous processes; they are attempting to both appreciate the world of the narrative and solve it in order to successfully traverse the game. In traversing the game world, players may at times be lead in certain directions by elements of the environment they encounter. Near the start of *Icarus,* a sign on the wall points in the direction of "reality" in order to encourage players to make their way further down the corridor. Later in the game, a hot air balloon and the empty panel of sky above it suggest to players that they might take flight and explore the skies. However, it is important to stress that ultimately it is always up to the players to determine their own path through the world. This freedom of choice is a key element of videogames, which offer us "the empowered experience of navigating our own individual paths" (Gazzard 2013, 8).

Murray notes that the ability to navigate through virtual landscapes "can be pleasurable in itself, independent of the content of the spaces" (1997, 129). This pleasure in navigation is one aspect of player agency, which can be defined as "the satisfying power to take meaningful action and see the results of our decisions and choices" (Murray 1997, 126). In aiming to make *Icarus* a more game-like experience than *A Duck Has an Adventure*, I took advantage of the browser-based aspect of the design to give the player direct control over the game's protagonist via the arrow keys on the keyboard. With this control in place, the representation of the protagonist serves as an avatar for the player within the game. The agency of the player in *Icarus* is significantly enhanced by the presence of an avatar with which they can identify and which they can use to navigate the game world. When considered in comparison to the earlier *A Duck Has an Adventure*, this increased sense of player agency is one of the key factors that makes *Icarus* feel more game-like in its nature.

Another set of linked concepts that are important to consider when comparing the gameplay of *A Duck Has an Adventure* and *Icarus* is the pairing of "aporia and epiphany" (Aarseth 1997, 90). Aarseth describes aporia and epiphany as the "pair of master tropes [that] constitutes the dynamic of hypertext discourse: the dialectic between searching and finding typical

of games in general" (1997, 91–92). In terms of gameplay, aporia can be thought of as either the puzzle or the pause the player takes in order to try to solve the puzzle, while epiphany is the realization of the solution that allows the player to progress onwards to the next area or puzzle within the game (Gazzard 2013, 103). In *A Duck Has an Adventure*, the majority of the aporia-epiphany loops in the gameplay come only toward the end of the game, as the player searches for the final hats, endings, and achievements needed in order to achieve a complete playthrough of the game. This play takes place primarily on the zoomed out view of the temporal map, which becomes of strategic use to the players as they attempt to spot unexplored branches or find new pathways to unlock.

In contrast, *Icarus* spreads the player's experience of aporia-epiphany loops much more evenly throughout the entire length of its gameplay. The player is presented with regular gates to progress that must be overcome through further exploration of the game world and the correct application of the items the player discovers. As the solution to each puzzle is reached, the moment of epiphany is accompanied by the reward of newly unlocked areas of space to explore and new puzzles to solve. In this manner, *Icarus* manages to deliver a significantly better-paced gameplay experience than *A Duck Has an Adventure*, again highlighting the latter of the two prototypes as the more consistently game-like in its nature.

Margaret Must Succeed

The first two prototypes are games of progression based in the exploration-driven adventure genre. With the third prototype, *Margaret Must Succeed*, my aim was to create a comic that drew tropes from a different genre of games. *Margaret Must Succeed* is a narrative puzzle game originally intended for release both as a browser game and Android App. Like *Icarus, Margaret Must Succeed* has a regular, game-like distribution of aporia-epiphany loops, but it removes the focus on exploration found in both *Icarus* and *A Duck Has an Adventure*. In a puzzle game, the puzzles may still act as gates to control the reveal of narrative, but for the player the focus is placed more on the puzzles as being "pleasurable in themselves. The suspense that accompanies an attempt to find a solution to a challenging puzzle, or the anxiety that develops from not finding one right away, is a significant part of what makes the puzzle so fascinating and engaging" (Danesi 2002, 226–227). There are already some examples of game comics that exhibit this focus on puzzle solving in their gameplay. *Strip 'Em All* (2013) is a browser-based puzzle game in which the player rearranges panel sequences and manipulates the visual and textual elements in panels to "reveal the inner nature of the characters" in each comic. *Storyteller* (2013) is a puzzle game intended for iOS, Mac, and PC in which the player builds "visual stories by placing characters and props into a comic-like sequence of frames" (Benmergui 2013a, n.p.). In both game comics, the mechanics of play revolve around the

player repositioning elements of the spatial network to create new meaning and narrative sequence out of sequentially juxtaposed images.

Strip 'Em All and *Storyteller* demonstrate "the pleasure of transformation" (Murray 1997, 154) that Murray identifies as being inherent to digital media. She asserts that digital mediation leads to artifacts becoming "more plastic" and "more inviting to change" (Murray 1997, 154). Barber similarly describes how the use of panel delivery in a digital comic can result in the creation of a "malleable page" or page-like grouping of panels (2002, 63). Hybridization with the mechanics of puzzle games extends this malleability further, giving the players a greater sense of agency in their transformation of the panels and sequences in each comic. *Margaret Must Succeed* also shares this quality, with a central gameplay mechanic based on swapping around key panels in the spatial network to "swap fates" between the different characters in the game. Unlike *Storyteller* and *Strip 'Em All*, which rely on stand-alone stories to provide the basis for each puzzle, *Margaret Must Succeed* uses this mechanic to tell a single, ongoing narrative.

The game's story follows the journey of Margaret, a young woman who must cross the city on a mysterious errand. Her journey is shown in a line of comics panels across the middle of the screen. The lives of other people in the city are shown in lines of panels above or below Margaret's. Certain panels in each line are highlighted as being swappable. When swapped, they alter the panels around them, creating new sequences of events that may change the content of another swappable panel. Each screen of panels represents one puzzle within the game, which the player must solve by changing events so that Margaret is able to continue her journey and progress forward to the next screen and the next puzzle.

As the game progresses, the challenges facing Margaret transition from the mundane (a missed bus; an empty phone battery) to the extraordinary (armed police raids; terror attacks). Juul notes than in puzzle games there is often an expectation on the part of the player for each puzzle to have "one single, perfect solution" (2005, 112). Aspects of *Margaret Must Succeed*'s design deliberately play against this expectation. While each puzzle has only a single solution, in terms of the narrative, this solution is deliberately imperfect; by solving each new puzzle the player makes the world better for Margaret, but worse for everyone else around her. As Margaret's actions become increasingly malign, the narrative is intended to make the players question their own complicity in the chaos Margaret's success causes for the rest of the city.

Although the player's actions may generate multiple different narratives while attempting to solve each puzzle, only a single correct configuration allows the player to progress further through the game. This aligns with Juul's classification of games of progression as characteristically featuring "more ways to fail than to succeed" (2005, 73). Juul (2005, 97–101) asserts the need for successful progression-based puzzle games to initially assist the player in understanding the mechanics of play and then to escalate in

difficulty as the game progresses. In *Margaret Must Succeed*, the first two puzzles feature limited options as to which panels can be swapped and additional written instructions that inform players of the basic mechanics of the game. As the game progresses, the puzzles increase in complexity, adding more parallel timelines that necessitate more swapping and re-swapping of panels to achieve each solution. In the more difficult puzzles, the complexity of the spatial network is increased by the potential to create multiple narrative sequences in which panels form new juxtapositional relationships that require new acts of closure to interpret.

Sustaining the escalation in difficulty in *Margaret Must Succeed* without over-taxing the player's ability to interpret the comic's spatial network proved challenging as development of the game continued. The designer of *Strip 'Em All*, Ola Hansson observes that developing "interesting stories for our game is not so hard, of course, what is hard is making those stories fun and challenging to play" (2013, n.p.). *Storyteller* creator Daniel Benmergui encountered similar problems in developing his game comic. Although the playable alpha version of *Storyteller* was complete enough to win the Independent Games Festival Innovation Award in 2012, Benmergui suspended development of the game before its final release (Benmergui 2013b). He attributes this decision to feeling "creatively numb," stating that time away from the game was needed to better resolve "a few important things" (Benmergui 2013b, n.p.) in the game's design.

The difficulties encountered by Hansson and Benmergui were mirrored in my own work on *Margaret Must Succeed*. More complex puzzles required more complex coding to implement. Additional work was also required to ensure that all possible panel combinations within the spatial network resulted in comics narratives that made sense when read in sequence. The creation of new, different and more complex puzzles proved increasingly hard, while the informal testing of existing puzzles amongst friends and colleagues pointed to other problems with the gameplay. Players reported some puzzle solutions as feeling too arbitrary and too easy to achieve through the trial-and-error swapping of panels. It was this combination of factors that eventually lead me to suspend development on *Margaret Must Succeed*.

While I may return to the game at a later stage, I decided that continuing to iterate on the design within my doctoral study would not be the best use of available time and resources. Despite the game comic being unfinished, my work on *Margaret Must Succeed* has provided useful insight into another approach to hybridizing the spatial qualities of comics and videogames. The problems encountered in completing the game also serve to highlight the difficulty of achieving a successful combination of narrative and gameplay within the game comics format. Creating content in a game comic requires competencies in both games design and comics creation; challenges that arise out of either discipline can destabilize the success of the project as a whole.

Conclusion

This chapter has provided an overview of some of the visual influences and narrative crossovers that exist between comics and videogames. Today, the digital mediation of comics has led to the two forms sharing the same platforms of consumption and distribution; it is in this context that the hybrid format of game comics has been examined. The chapter has identified game comics as a format of comics that exhibits some of the key characteristics of a game and uses some of the key characteristics of the form of comics in its gameplay. The creation of the three game comic prototypes detailed in the chapter has allowed for an analysis of the ways in which the spatial nature of the two forms can provide common ground for such hybridization to occur. These prototypes operate as games of progression, with narratives that are advanced through styles of gameplay focused on the construction, exploration, or manipulation of each comic's spatial network.

In most traditional comics formats, readers are in full control of the reading and navigation of the comics' spatial network. Game comics operate differently, with deliberate limits placed on the ways the reader can view and progresses through the network. The more agency readers feel in controlling their navigation of the spatial network within these limits, the more game-like the experience of reading the comic becomes. A regular dispersal of aporia-epiphany loops throughout the comic is another key factor in creating a more game-like experience for the reader. These loops might typically take the form of a series of gates that prevent the reader's progress, forcing them to pause to find a solution that then allows for further progression.

In the creation of game comics, designing and implementing these progression gates can at times be challenging due to the potential complexity of interrelations between the panels that form a comic's spatial network. Because of their nature as a hybrid format, successful game comics must achieve a balance between their operation as comics narratives and the provision of an engaging gameplay experience. This balance can be difficult to achieve, as it requires creators to draw on design skills from two distinct disciplines. Ultimately, the design of a successful game comic may require simplifying some characteristics of the form of comics or some elements of gameplay in order to create an effective working balance between the two.

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