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Gaming The Comic Book: Turning The Page on How Comics and Videogames Intersect as Interactive, Digital Experiences

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Gaming The Comic Book:
Turning The Page on How Comics and Videogames Intersect as
Interactive, Digital Experiences

by

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A Thesis submitted to the faculty of
Gardner-Webb University
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Chapter 1 – Introduction – Sketching Out an Epiphany

Unbound Saga is a PlayStation Portable videogame released in 2009 by Vogster Entertainment. The title has the player punch and kick his or her way through hordes of grunts, and all of this action is perceived from a two-dimensional perspective in an unconventional yet clever comic book art style. These seemingly positive traits do not reflect the mediocre reception that the videogame received. Former *IGN* editor Greg Miller wrote, “the dialogue is funny, the story is interesting, and the levels look like they're pulled from comic books. Still, the gameplay isn't all that fun, and the title's definitely not that deep of an experience . . .” (Miller). Former *Eurogamer* editor Kristan Reed said, “this painfully repetitive slugger reminds us how dull games can be. . . . [I]t's the worst kind of gaming stodge parachuted in from an era when we didn't know any better” (Reed). These observations may seem damning, but these critics among others did have some admiration for the graphics that show the player's character leaping across comic book panels alongside words that pop up such as “CLANG” and “WHAM” while fighting. Instead of blood splattering from landed hits, ink mars the pages that the characters are represented on, and a human hand draws in more enemies to increase the difficulty of fights. The videogame's end objective is to help the protagonist escape from his comic book world to confront the human “Maker.” However, the ending sequence reveals that the protagonist has not been in a comic book. As a side character makes clear, he has been in a videogame the whole time. This other character goes on to say that *Unbound Saga* is not about comics, but “[f]reeform interactive entertainment! Really, it's what most comic books dream of becoming these days” (Vogster). Rather than actions being dictated by the singular direction of the Maker (i.e. the artist), artificial intelligence

and the player's actions shape the experience as well. This ending may seem like an inconsequential claim on how comics can be distinguished from and relate to videogames, but it inadvertently taps into a wealth of challenging issues and questions. We can seriously consider the similarities and differences between comics and videogames, and the effects of them both being combined moves us to ask whether the resulting artifact is more like a comic, videogame, or something in-between.

These are surface-level questions that arose from my professional and academic history. Since videogames have always been an area of interest for me, I have come to know much about their history and lingo as a journalist in the industry. To aid my pursuits in this career, I studied game theory, criticism, and development at High Point University with a Bachelor's degree in Game and Interactive Media Design. This path led to my pursuit of a Master's degree in writing studies at Gardner-Webb University to broaden my horizons as a writer and become an informed layman of English studies. However, there was one class I did not anticipate in my graduate program, and that class was "Visual Rhetoric." I learned that elements like shapes, colors, composition, and materials can carry as much meaning and weight as text. Advertisements, storybook illustrations, and even traffic signs are but a few examples of "writing" that communicate ideas and messages just as powerfully as the letters and words that we traditionally think of, so when the class broached comics studies, I was curious to see how comics would fit in as a visual rhetoric within writing studies. I eventually learned that comics place different emphases on and interplay between words and images to craft stories. In other words, the art form epitomizes the balance between *visuals* and *rhetoric* to make *visual rhetoric*, and I believe comic theorist Scott McCloud would concur:

In comics at its best, words and pictures are like partners in a dance and each one takes turns leading. When both partners try to lead, the competition can subvert the overall goals . . . though a little playful competition can sometimes produce enjoyable results. But when these partners know their roles – and support each other’s strengths – comics can match any of the art forms it draws so much of its strength from. When pictures carry the weight of clarity, they free words to explore a wider area. . . . On the other hand, if the words lock in the ‘meaning’ of a sequence, then the pictures can really take off. (McCloud “Understanding” 156-157, 159)

Comics can flex the rules with words and images, and this made me wonder if words, unlike images, are important but not entirely necessary for comics. Could elements be included, removed, or altered to turn the medium into something else or something more? Two videogames I played around the time I took the class, called *The Legend of Kay Anniversary* and *Metal Gear Solid: Peace Walker*, contained answers to my question because both contain cutscenes (i.e. pre-rendered videos that contain large portions of story exposition to separate game levels) that were made to look like comics. While the former game experiments with zooming techniques, sound effects, and voice acting to complement the static art of panels, the latter uses these and significantly more techniques like animation applied to comic-like onomatopoeia and the artwork itself. Videogame-like interactivity is also incorporated, which has the user look around and zoom in on pages or press a button rapidly to “turn” to the next page. After pointing out examples like these in a blog post for my class, I concluded that the “digital space [is] where comic books can transcend their traditional limitations...either minimally or

drastically” (Thurmond). However, I did not realize how problematic this conclusion was at the time. I did not consider the loss of comics’ materiality and naturally static state or the implications of adding multimedia and other forms of interactivity. These things can suddenly make comics more like animated films, videogames, or amorphous multimedia artifacts instead.

There was more to the digital comic pages of the cutscenes I analyzed than I originally assumed. Once I had played the aforementioned videogames in full, I delved deeper into my research to find other videogames with comic aesthetics, web comics with interactivity, and videogames with stories derived from comics and vice-versa. In doing so, I found that there are nuances in how comics transition to digital formats either as copies of print comics or complex versions with multimedia and/or interactivity. The discrepancies between digital comics are staggering, but the potential of what they could be is even more so. However, creators in the comics industry have not taken much advantage of available technologies despite having access to theoretically infinite possibilities to reshape how the medium can be created and experienced digitally. There is not a clear demand for digital comics to branch out either, since the culture and market of the industry seems content with them primarily being digitized copies of print issues. After all, overall comic book sales have been on the rise with print sales growing from “an estimated range of \$650 to \$700 million in 2009 to \$825 million in 2014” and digital sales going from \$1 million in 2007 to \$100 million by 2014 (DiChristopher). Despite other media like newspapers, television, and music being respectively forced to adapt into websites, streaming services, and online stores, the dual market of print and digital for comics has not instigated an imbalance. However, an upset is plausible when digital

comics tap into technology's benefits with multimedia and/or interactivity, such as with Blizzard Entertainment's *Overwatch* comic series that ties into the official videogame's story. The static versions of the digital comics are prominently displayed on *Overwatch*'s official website, but when *Reddit* user warpedbullet shared a hyperlink to multimedia versions of the same comics, other users were pleasantly shocked. "I only found them yesterday; sucks because they read so much better than the standard comic," Liber_Monstrorum commented. Shimaboyz replied, "This made the comics 1000x better, wow." Grimmlingur added, "These are by far the better way to experience these comics," and one of the most interesting comments comes from DutchShepherdDog, who wrote, "I'm not big into reading comics so I'd never sought out the *Overwatch* comics, but this holds my attention and the presentation is great and really slick" (warpedbullet).

These strong reactions lend credence to a past observation by Apple Co-Founder Steve Jobs, who said, "A lot of times, people don't know what they want until you show it to them" (Mui). This effect can be said for the interest in and potential evolution of digital comics if they experiment with multimedia *and* interactivity in meaningful ways, but there seems to be an unsaid reluctance to do this in the comics industry. The same hesitation could be applied to the deafening reticence of scholars and theorists on digital comics. Areas of English studies involving new media, interactivity, genre theory, remediation, and more are missing out on analyzing a burgeoning medium ripe with implications for comics studies by studying the interplay between more than just words and images. A movement for digital comics and associated studies should have intensified years ago, but little research has accumulated and grown with respect to how the comic form continues to be shaped and innovated upon by this technological

transition. Perhaps the potential multisensory nature of digital comics conflicts with how most people understand and defend the medium as a strict interplay between words and images in print, but such a limited scope of what comics should be flies in the face of how large portions of English studies have embraced digital change. Whether it is the kinds of multimedia texts that instructors can teach with, digital tools altering the ways that students relate to their instructors, or questions over how literacy is shaped by new media, this long period of rapid advancement has impacted every field and lessened the opposition wanting to maintain tradition. Gunther Kress, a prolific author and professor of semiotics and education, reflects this opposition's concerns in a levelheaded manner by laying out the changing nature of literacy because of this transition:

The affordances and the organisations of the screen are coming to (re)shape the organisation of the page. Contemporary pages are beginning to resemble, more and more, both the look and the deeper sense of contemporary screens. . . . It is possible to see writing once again moving back in the direction of visuality . . . as an element of what are and will be fundamentally visual entities, organized and structured through the logics of the visual. (Kress 6-7)

The innocuous presence of digital comics and their nascent potential to incorporate multimedia and interactivity could result in a drastic shift for the literacy of comics with the logic of the screen. There are limitless directions with how branching narratives, game mechanics, controls, and more could be applied to the production of comic art and writing. These possibilities are why my foray into digital comics is not only a natural path to take due to my areas of expertise and academic experience, but also one to tread out of necessity for English and comics studies.

McCloud was one of the first comic theorists to profess digital comics' potential by outlining the limitless capabilities of the "infinite canvas" in how creators could present and construct pages and panels in different directions and dimensions (McCloud "Reinventing" 200-233). Since then, his speculations in 2000 have been extended by a handful of scholars. Some have gently poked at while others have seriously studied the link between comics and videogames; it is a connection that could reveal how multimedia elements like animation, sound, and three-dimensional space can work alongside the visual language of comics, thereby altering the ways in which artists and writers convey their work in this medium. The concept of interactivity is challenged by digital comics with the implementation of game design for videogame-like immersion. Distinctions must be made in what one means by "interactivity," which brings up the involvement and role of the reader in digital comics and how this involvement compares to other forms of participation in media. There is a matter of discussing digital comics genres and how audiences and their creators define them alongside comics and videogames. In addition, there is a need to discern how the process of reform with digital comics occurs between the two mediums, since an old one (comics) is realized with the elements of the new one (videogames) via a new mode (digital as opposed to print) as a new medium (digital comics). It could mean the rise of a hybridized genre that blends comics and videogames together in a special way that neither medium could accomplish alone.

These areas of concern will be further addressed, but for now, they are only being mentioned to demonstrate why digital comics are not only an anomaly for comics studies, but also a challenge for English and game studies. New media and film studies could be included as well depending on how interactivity, animation, and other multimedia

elements are present, so it is no wonder why digital comics evade the analytical eyes of academia and are uncommon ventures in the comics industry. I intend to combat this timidity by exploring the depths and diversity of digital comics and turning the page on how comics and videogames relate to one another. How do they intersect in design as digital comics and are currently perceived by differing audiences as a media and genre? The question begs for a new hybrid medium to boldly come forward that could have historical and theoretical consequences for comics and videogames. A new age of comics will be charted if scholars and creators are willing to explore the unmapped landscape between these two medium mountains. There are many digital comics within this landscape, but the heart of it holds the grand promise of interactive, digital comics.

Chapter 2 – Literature Review – A Walkthrough of Concepts and Theories

Precedents need to be established before I analyze my selected digital comics to avoid ambiguity and contradiction with the concepts and theories I will be using. Since I have already painted a general picture of digital comics and how they largely consist of replications of print comics, it is natural to wonder why there is a focus on maintaining the status quo across materialities. If we start with how comics are defined within comics studies, the answers to this issue will start to unfold, eventually expanding into discerning the place and definition of interactive, digital comics.

What Are Comics?

Legendary comic artist Will Eisner is one of the forefathers of comic theory. He believes the medium consists of “a series of repetitive images and recognizable symbols. When these are used again and again to convey similar ideas, they become a distinct language – a literary form, if you will. And it is this disciplined application that creates the ‘grammar’ of sequential art” (2). It is also “[t]he fundamental function of comics to communicate ideas and/or stories by means of words and pictures involv[ing] the movement of certain images (such as people and things) through space” (39). In other words, he is saying that the repeated sequence of images and unifying implementation of symbols (whether they be letters, shapes, etc.) defines comics. Comic theorist Scott McCloud borrows from Eisner’s work to create a slightly more distilled yet broad definition. McCloud views comics as “[j]uxtaposed pictorial and other images in deliberate sequence, intended to convey information and/or to produce an aesthetic response in the viewer” (McCloud “Understanding” 9). His definition is noticeably looser in qualifications because when he writes “other images,” he is not just talking about

icons, but letters as well (8-9). Examples would include art like ancient Egyptian paintings and stained glass windows from churches that have their own spatial arrangements without words, which can be just as sequential as traditional comics with storytelling (9, 14, 20). The combination of words and images may be crucial for the majority of comics, but Eisner would concur with McCloud that the former can be scrapped if an artist understands that “graphic storytelling” can speak on its own through “the skilled manipulation of this seemingly amorphous structure and an understanding of the anatomy of expression” by “exploit[ing] imagery in the service of expression and narrative” (Eisner 9-11). In the end, both theorists emphasize the role of other images/symbols (i.e. words, icons, etc.) and pictorial images in sequence but agree that the former is not always necessary. Metropolitan State University of Denver’s Dr. Leslee Rene Wright, whose dissertation addresses comics from a literary and textual standpoint, sees comics as “any narrative (excepting the single-paneled cartoon) that is composed in the language of image/text interplay” (3). She affirms how words are key to the reading and interpretation of comics even if they are not required:

While graphics may be more significant to the comics form in that there are comics without any text to speak of, when it comes to text/image interplay as a story-telling device, both elements contribute to the reader's construction of the comic's story. Nevertheless, the intended unity of text/image can be obscured by the reader’s tendency to favor one element over the other. (Wright 27)

Since comics are “a mono-sensory medium [that] relies on only one of the senses to convey a world of experience” through visuals alone, the perception that artwork alone is all that matters for comics is inaccurate (McCloud “Understanding” 89). Comics have

also faced the issue of being defined narratively, materially, and thematically over time, and “the term ‘comics’ itself . . . does not really imply anything about the form other than the possibility of humorous subject matter,” which has led to complicated cultural associations of comics being childish entertainment rather than a legitimate medium (Taylor 4). McCloud writes that “matters of style, quality, or subject matter” should not be included in definitions of comics (McCloud “Understanding” 5), but this perspective still plagues the medium. A fitting example comes from the historical movement to define comic books as “graphic novels” during the late twentieth century to “foster the misconception of comics as a genre rather than a form” (Taylor 3). It was an attempt to validate and define comics by mature story themes and art, rather than by the form itself.

Dr. Jeffrey Kirchoff an assistant professor at Millikin University teaching on rhetoric, writing, comics, and videogames, confesses that it seems hopeless to get at comics’ “fundamental essence” since there are many definitions to consider (Kirchoff). However, he believes we can at least identify the ubiquitous parts and recognizable format of comics. The first of these parts is “pages,” which dictate the amount of space and order of any presented elements; “panels” contain the blocks of art that readers follow; the “gutter” consists of the spaces between panels; “icons” are symbols loaded with meanings and ideas; “captions/word balloons” provide additional context to the visual narrative (Kirchoff). All of these elements do not need to be present (like captions/word balloons) and can be used in different forms (e.g. print or digital), but the above definitions of comics usually means that most, if not all, of these parts are present.

Pushing The Boundaries of Comics

My definition stresses that comics’ storytelling is communicated spatially through

images, creating a sense of temporality with art and symbols in sequence. Constraints based on materiality, narrative delivery, and other superficial aspects are not included in my definition. As long as the art form (i.e. the design language and general parts) of comics is overwhelmingly present, how or where the medium is presented does not necessarily matter, meaning that the digital space's advantages for comics are welcome up to a point. This is a contentious point that Eisner touches upon when comics were beginning to shift to digital formats and what that transition meant for comics' production, distribution, and creation:

There is a certain dynamic of tactility and space in print that is very different from the 'feel' of an image on a monitor. We must not lose sight of the basic fact that sequential art is a literary medium that narrates by the arrangement of images and text in an intelligible sequence. . . . As long as comics remains a medium which does not have motion, sound or three-dimensionality, the narrative process is the same. (Eisner 170)

Other than mentioning the possibilities of experimental panel arrangements with the infinite canvas and how this technology can alter conventional reading patterns, Eisner makes no further observations about digital comics (171). His silence is disappointing in light of the debatable conclusions he draws since I disagree that the "narrative process" needs to remain the same. As long as multimedia *and* interactivity are subservient to sequential art, that is what matters, and I believe McCloud would agree with my position. He instigates a rallying call to the comics industry with *Reinventing Comics* in the face of troubling financial prospects during the late 1990s to adapt and innovate in several areas. One of these areas is experimenting more with multimedia and

the digital realm. He writes that “tools change worlds when the ideas behind them are strong enough,” and with digital tools, they “can be such a distraction from the promise of a new technology” if people do not look past the mode to focus on what can be done within it (McCloud “Reinventing” 136-137). He suggests multiple effects that can be applied to comics via editing software to amplify comics’ visual narratives (146-147), mentioning how creators are already doing this by exploring new grounds in terms of multimedia, panel arrangement, and interactivity with “online comics” (165-166). There are also new possibilities with the infinite canvas by altering how panels are organized or morphed (222-229). However, he warns that “additive approaches sidestepped the question of comics’ own evolution by letting comics become an undigested lump in multimedia’s stomach without ever expanding on the ideas at comics’ core,” which can be seen in multimedia comics produced on CD-ROMs during the 1990s (208-209). In other words, additive approaches are when multimedia and interactivity serve as gimmicks alone for digital comics, but if creators adopt a transformative approach instead, “the pattern of [comics’] growth will place comics’ future in a whole new light” (207). The medium may dramatically change, but as long as it sustains a “durable mutation” that still pushes the limits of comics, this is the type of transformative approach that the comics industry and creators should advocate for digital comics (207).

The above reasons are why my definition supports the implementation of interactivity and/or unconventional elements (e.g. sound and animation) as long as they do not overpower the quintessential role of sequential art, meaning that digital comics can contain multimedia and/or be interactive to a certain extent. Nothing should stop the expansion of comics’ vocabulary and architecture, as it were, within the digital mode.

This view represents a more fundamental outlook toward defining comics where we should “grasp the essence of comics” so they can transfer to “[a]n environment that will include both the new technological landscape and the needs and desires of its potential audience” (McCloud “Reinventing” 206-207). However, McCloud has a caveat: creators should not be overly ambitious with multimedia since digital comics could reach the point where they would be better off morphing into film or videogames (210). While he has a legitimate point, it should not deter the pioneering spirit of digital comics. Now, before multimedia and interactivity’s effects on digital comics can be discussed, I mentioned earlier that this has been made possible with a process of reform to create hybridized genres and re-purposed mediums. This process is called “remediation.”

What is Remediation?

Most people would call digital comics simply “digital comics,” but such a reductive view ignores their vast diversity made possible with remediation, which is a concept developed by new media scholars and authors Jay Bolter and Richard Grusin that indicates “the representation of one medium in another” (45). As a side note, I would also suggest that the definition could be reworded as “the representation of one medium in another medium or mode” because modes (e.g. forms of spatial, linguistic, visual, gestural, or aural delivery) are used as channels, if you will, for mediums (e.g. the Internet, videogames, live performances, etc.). As an example, the medium of books can be literally depicted through or translated to the medium of film, but books can also be represented through another mode like eBooks. The difference between physical and digital is a matter of modes and the difference between media is a matter of mediums, but the point is that in either case, remediation is evident.

Remediation has occurred for as long as mediums have existed. The printing press was a re-imagining of the handwriting process and photographs were a means to achieve more realism over paintings, so traces of the past always exist in new media. Egyptian paintings and churches' stained glass windows are good examples of the comic art form's forerunners. Comic strips and comic books are remediations of these ancient comics, and in turn, digital comics are remediations of comic strips and comic books. Now, the reason why remediation persists is because "[o]ur culture wants both [immediacy and hypermediacy] to multiply its media and to erase all traces of mediation: ideally, it wants to erase its media in the very act of multiplying them" (Bolter and Grusin 5). Immediacy is desiring an immersive experience where the user is unaware of the medium they are participating in. On the other hand, hypermediacy "multiplies the signs of mediation and in this way tries to reproduce the rich sensorium of human experience. . . . In every manifestation, hypermediacy makes us aware of the medium or media and (in sometimes subtle and sometimes obvious ways) reminds us of our desire for immediacy" (33-34). The authors call these two concepts working in unison a contradictory "double logic" that can increase immersion (immediacy) by magnifying the amount or awareness of medium(s) present (hypermediacy). In regard to digital comics, conflicting goals of immediacy and hypermediacy are evident in their remediation to the digital space. Kirchoff argues that digital comics should primarily "resist becoming a 'retro' technology by shifting attention from immediacy to hypermediacy; rather than attempting to forget the medium" (Kirchoff). The retro technology he refers to is seen in digital versions of print comics that "[offer] the same content and form as print-comics, [so] digital comics are perhaps attempting to make all readers forget they are reading their

favorite graphic narrative on a kindle instead of reading a floppy” (Kirchoff). This is what he means by immediacy, and he believes the desire for it should shift to hypermediacy so the comics industry does not relegate digital comics to an existence of replicating print comics in a digital format. This trend toward retro technology is arguably more harmful than the additive approach outlined by McCloud since multimedia and interactivity, even as gimmicks, are at least providing glimpses into innovative, hypermediated possibilities with the digital space. There is certainly a place for digital versions of print comics, but it is tragically stubborn to doom all of digital comics to this fate alone for immediacy’s sake.

Coming to understand how digital comics came about and how they might evolve might just reveal their trajectory as a remediated medium as Dr. Jakob F. Dittmar suggests. Recognized with a “*Venia Legendi*” (“for permission to lecture”) and “*Facultas Docendi*” (“to teach ability”) in comics studies by the Technical University of Berlin, he gives a voice to the difficult place that digital comics find are in because of remediation. “Digital comics can easily transgress on the definition of comics as mostly ‘juxtaposed pictorial and other images in deliberate sequence’ as they may contain moving images, be accompanied by audio tracks, or even are narratives in true multimedia, i.e. utilize an interdependency of media to tell a story” (Dittmar “Digital” 83). Not only can digital comics be considered “tertiary media” since readers need technical tools and devices to access them, but also “quartary media” when users have the ability to influence a digital comic’s story through interactivity (83). It is easy to see how the variance among digital comics occurs since they can range from being download comics (i.e. print comics converted to PDFs) to web comics, and this scope does not account for more differences

in terms of multimedia and interactivity that are possible on videogame console platforms, smart phones, and tablets. Dittmar argues that too many changes can make digital comics “no longer comics in accordance with the established definition of this class of media, but animated film or multi-media products. They have to be understood as being another medium” (Dittmar “Digital” 88). But no matter how different digital comics are from each other, all of them “can define their own format” (87). This point signifies that there are varying extremes of remediation with digital comics because “[d]igital comics can follow [comics’ dramaturgical] conventions or break them by introducing different pacing of story-arches that would not fit on manageable printed formats” (84). To understand the range of remediation that occurs in the digital space of comics, we can look at how conversions of comics to film unveil how there are different kinds of remediation.

The Splitting of Remediation

Whereas remediation is the use of another medium within another medium, “adaptation” is when a medium is not literally present in another medium; only the prior medium’s narrative and/or thematic content is carried over to the new one (Morton 7-9). Comic and film theorist Drew Morton writes, “adaptations can engage in the process of remediation if . . . the original medium is ‘appropriated or quoted’ in the adaptation, [so] remediations . . . translate the art form itself” (23). His analysis of the *Scott Pilgrim vs. the World* movie is indispensable because he demonstrates how it is not only an adaptation, but also an effort to recreate the visual iconography and language of one medium in another through “stylistic remediation” (181-183). Based on Bryan O’Malley’s comic series *Scott Pilgrim*, the film captures the original story with actors

and actresses representing the same characters with similar dialogue throughout inspired events, places, and moments from the comics. However, the film is not only an adaptation of its narrative. It also contains scenes that replicate the form of the comics with visually represented sound, flashbacks shown in the original art style, and remediations of “the shifting dimensions of O’Malley’s comic by alternating between the filmic equivalent of a splash page and that of a paneled multiframe” with “a variable aspect ratio” (31). These attributes put the film in a paradoxical state where the viewer is compelled to not only watch, but also read the film as a text of sorts (25). The film’s director, Edgar Wright, even applies the comic logic of spatial manipulation to alter perceptions of how long events are perceived in a medium (i.e. film) governed by time. Film theorist Kristin Thompson says that this kind of remediation stems from a “transtextual motivation [that] is a special type which preexists the artwork, and upon which the artist may draw in a straightforward or playful way” (qtd. in Morton 183).

When print comics are converted without any acknowledgment of the original medium, this is adaptation motivated by immediacy to immerse the viewer in the new medium alone. It is a type of pseudo-remediation that can be seen when comics are fully adapted into videogames that do not acknowledge or even superficially use the old medium. In other words, the comic is only referenced aesthetically or narratively in videogame adaptations like *The Walking Dead: A Telltale Game Series* and *Injustice: Gods Among Us*. They may be videogames based on comic books, but they are not experienced like comics. On the other hand, true remediation is found in stylistic remediation because it meaningfully recognizes an original medium while conforming it to the features of the new one by bringing more attention to the act of mediation. Comic

book films usually do not have stylistic remediation with hypermediated content, but Morton argues, “To produce a comic book film without dealing with its unique formal devices is like adapting a musical and neglecting to include the music; it may work but it also fails to realize what is fully unique about the original form” (110). If remediation remains immediate with print versions of digital comics, then the medium will continue to miss taking advantage of the digital space. Since Kirchoff calls these digital comics a retro technology, I would like to call the process of reform guiding their creation “retro remediation,” which is when an old medium is represented in a new one with minimal alterations so as to maintain immediacy with the old one. For example, a document that has been photocopied into a digital format on a computer without alterations is akin to retro remediation. On the opposite side, adaptation is when an old medium is fully converted to have immediacy with the new one without any acknowledgment of the old one. Taking the document as an example once more, adapting it into a digital format would be like translating and communicating its message through a video with little to no references to the original document form. In either situation, the new or old medium largely overpowers the presence of the other, but a tension must be struck for stylistic remediation. Digital comics can capture this balance with multimedia and interactivity to heighten hypermediacy and immediacy to their fullest potential in tandem.

The Balancing Act of Remediation

Retro remediation is low-level effort type of immediacy that turns digital comics into a retro technology. As McCloud writes, this “conservatism is a small example of the broad tendency we all have to interpret new media through the filter of the old,” which is evident when digital comics are just digitally copying print comics (McCloud

“Reinventing” 141). The implementation of multimedia and interactivity results in stylistic remediation to make interactive, digital comics; the original art form is largely present while its previous limitations and boundaries are still being pushed. This approach is a middle ground between immediacy and hypermediacy, remediation and adaptation, and comics and videogames. Rather than completely replace and forget the inability of comics to portray fluid time, sound, and three-dimensional space with adaptations, stylistic remediation celebrates these limits. One could say this remediation is energized by a transtextual motivation. Bolter and Grusin even seem to indirectly describe the spirit of this motivation, writing, “Creators of other electronic remediations seem to want to emphasize the difference rather than erase it. In these cases, the electronic version is offered as an improvement, although the new is still justified in terms of the old and seeks to remain faithful to the older medium's character” (46).

Gunther Kress, a theorist and prolific author in semiotics, advises caution with a reevaluation of how to approach remediation due to the profound impacts it can have. While he is mostly laying out changing definitions of literacy with the advent and unprecedented evolution of technology, he predicts that “the dominance of the mode of image and of the medium of the screen will produce deep changes in the forms and functions of writing . . . hav[ing] the widest imaginable political, economic, social, cultural, conceptual, and epistemological consequences” (1). He also points out the affordances of digital media since they allow a “multiplicity of modes, such as music and sound effect [sic]” and “representational and communicational action by [this medium’s] users; this is the notion of ‘interactivity’ which figures so prominently in discussions of new media” (5). Despite addressing the relationship between images and words, Kress

does not allude to comics at any point, but he does discuss how images and words are governed by differing logics in their delivery. Words are “temporal/sequential” and images are “spatial/simultaneous,” but I think he underestimates the ability to apply order and sequentiality to images in his distinction (20). Eisner would likely tell Kress that “the artist must, from the outset, secure control of the reader’s attention and dictate the sequence in which the reader will follow the narrative” through careful layouts and panel design that governed by sequentiality (Eisner 40).

Regardless, Kress warns that the “functional specialisations” of both words and images have been changing. Since technology has favored the power of the screen and images over pages and words, the former’s logic is dominating the latter (Kress 20). He is saying that the screen is decreasing the value of writing in a temporal/sequential sense because of the spatial logic that comes with interactivity and multimedia, but when these logics clash, it is important to remember that “all aspects of form are meaningful, and that all aspects of form must be read with equal care: nothing can be disregarded” (44). Therefore, the “functional load” of each mode (words and images) is important and must be evaluated within each medium (46). Simply letting one completely overshadow the other is reckless. Instead, “[a]wareness of the affordances of modes and the facilities of media provides competence, but design crucially introduces the interest and the desire of the maker of the message/text. . . . Design is prospective not retrospective, constructive not deconstructive, utopian not nostalgic” (50). This awareness is necessary to embed in comics industry creators, especially since Bolter and Grusin discuss how mediation of any sort is always governed by remediation because mediums are incapable of existing outside of cultural and social influences (55). The authors also cite literary critic Fredric

Jameson to profess the negative side of remediation that echo Kress' previously mentioned concerns about changing literacy. Jameson writes:

[V]isual media are challenging the dominance of older linguistic media. The most powerful form of this 'critical and disruptive challenge' is video, whose 'total flow' threatens the physical and temporal differences that constitute linguistic meaning. . . . In fact, television, film, and now computer graphics threaten to remediate verbal text both in print and on the computer screen-indeed, to remediate text so aggressively that it may lose much of its historical significance. (qtd. in Bolter and Grusin 57)

The adaptation of comics into the digital age is a warning that they could be bastardized to the point of becoming more like videogames, film, or some other medium, but restraining comics to retro remediation is not the right response. In fact, it is ironically problematic because "[w]hile readers may get their story – and the necessary 'parts' of a comic, the transformation of print to digital necessarily causes a different kind of reader-text interaction" due to the loss of materiality and other factors (Kirchoff). By focusing on immediacy, "remediat[ing] print comics to digital fail[s] to capture the 'new media' spirit described by Bolter and Grusin" (Kirchoff). As we can see, there are many degrees of remediation with the application of digital tools and elements that shape digital comics. Once we understand these tools and elements as "affordances," we can work our way toward the right balance necessary to create interactive, digital comics.

The Revelation of Affordances Through Remediation

"Affordance" is a term derived from the ecological theory of perception crafted by Dr. James J. Gibson. He was a psychologist specializing in visual perception, and he

believes that the world and its environments can be perceived and manipulated on various levels in relation to an animal's needs and desires. "[The animal] is a perceiver and a behavior *in* the environment," that is intimately tied to and dependent on its surroundings (3-4). These surroundings consist of units that are "nesting" within them, which persist and morph over time in what the animal recognizes to be constant or ephemeral (5-9). These units are mediums that shift in relevance with respect to the animal, such as the ocean, mountains, and land. They allow creatures "possibilities or opportunities, these *affordances* as I will call them, are invariant" (15). Within these mediums, substances are abundant and can be mixed, changed in form, or prove safe or dangerous "for eating, for resisting locomotion, for manipulation, and for manufacture," such as fire, wood, or rocks (15-17). In other words, the world is our environment/surroundings with several mediums (i.e. habitats) that vary in what substances (i.e. natural materials and elements) they contain. While this philosophizing over animals' biological and sensory relationship with physical objects may seem far removed from my thesis, it proves surprisingly applicable to how humans shape media. Remediation is also a constantly evolving process that takes the world of media (environments) and its separated genres (mediums) to craft and change them with different materials (substances) to fashion and refashion the old and new. Gibson explains that affordances are derived from surfaces that the animal perceives, and "to perceive them is to perceive what they afford. This is a radical hypothesis, for it implies that the 'values' and 'meanings' of things in the environment can be directly perceived" (119). This explains how people find what he calls "niches" in their environments since individuals recognize how surfaces benefit themselves and others. It is why we alter these surfaces, thereby slowly morphing mediums, and even

their environments, over time by recognizing what they are capable of uniquely communicating, addressing, and so on (120-121). The same effects occur in remediation.

If we take a medium like comics, it has borrowed from the ancient mediums of words and images to become what it is today. With the rise of the digital mode as a parallel environment to the “real” environment of the physical mode, the substances people use to create and deliver comics changes the medium itself into digital comics. Computers and drawing tablets are substances of creation that grant access to the digital substances of multimedia and interactivity. They are indelibly there waiting to be recognized as digital niches, whether or not perceivers recognize them as useful substances for the medium of comics to harness. Gibson writes, “The affordance of something does not change as the need of the observer changes. The observer may or may not perceive or attend to the affordance, according to his needs, but the affordance, being invariant, is always there to be perceived” (130). Despite these digital niches for comics being observable, the reluctance of the medium’s industry and creators to use them more earnestly goes on. This observation reveals that many people believe there is no need for these digital niches, but “despite digital comics' momentary boom, eventually [they] could become irrelevant” if they continue to merely be digital versions of print comics (Kirchoff). Some of these ignored niches, or affordances, include concepts such as McCloud’s infinite canvas, which represents art beyond the two-dimensional limitations of paper to the three-dimensional space of the digital world by extending panels and their layouts. It is one of many concepts showing how “comics can take virtually any size and shape as the temporal map – comics’ conceptual DNA – grows in its new dish” (McCloud “Reinventing” 223). In the same vein, other digital substances

should be used in such a way with affordances like touchscreens, advanced software (involving animation, 3D modeling, programming, etc.), and more to prove McCloud wrong that “sound and motion . . . becomes superfluous, if not a nuisance” that will not last in the future (210). If this pitfall can be avoided, then comics industry creators will have truly recognized digital affordances to advance the medium of comics. Only then can the ultimate foundation for these affordances be explored with videogames, which are intimately tied to the “interactive” part of interactive, digital comics. Indeed, Dr. Laurie Taylor, who teaches and leads projects in digital humanities at the University of Florida, argues that the illuminating connections between comics and videogames “[open] up the possibility of more precise discussions of reader response and interactivity, where video games could learn a great deal from the hypertextual nature of comic seriality and comic narratives” (23). I do agree that videogames can certainly learn from comics, but this study is focused on comics learning from videogames.

What Are Videogames?

Like comics, a definition for videogames is not easy to pinpoint. Tracy Fullerton, who is heavily involved in the games industry and teaching of game design with various university projects and programs, believes a game (whether physical or digital) is a “closed, formal system that engages players in structured conflict and resolves its uncertainty in an unequal outcome” (43). It is purposed to entertain rather than “create a product, perform a task, or simplify a process” (111), which is what the “formal and dramatic elements” are intended to accomplish by, respectively, establishing the structure and system of a game (formal) and building contextual, emotional context (dramatic) around these elements (42). She writes, “[O]ur perspective here is not strictly scholarly,

and our purpose here is not to provide a definitive taxonomy. Rather, it is to provide a useful context, a set of conceptual tools, and a vocabulary for us to discuss the playcentric process of designing games” (xiii, 33). Her perspective is useful to creators who desire to integrate game design with interactive, digital comics, rather than stating that the connection between the two simply exists.

Katie Salen, a professor in computing and digital media at DePaul University, and Eric Zimmerman, a game designer and theorist across many universities like New York University and the Parsons School of Design, analyze the raw nature of games. Just as Fullerton writes that games are closed systems, they come to a similar conclusion that a “game means making choices within a game system designed to support actions and outcomes in meaningful ways” (6.1). Games could also be considered interactive formal systems with sets of objects that possess attributes and internal relationships in a constructed environment (3.3), but what separates videogames from board games or sports? Videogames have less layers of physical interactivity reduced to a set of inputs for a device, automated systems that can be understood through play even if the rules are hidden, and networking through the Internet (8.6).

Egenfeldt-Nielsen and et al. delve into more theoretical, historical territory instead of systematic discussions. They bring many definitions from game theorists to the front, and the first of many comes from Brian Sutton-Smith, who sees them as “an exercise of voluntary control systems in which there is an opposition between forces, confined by a procedure and rules in order to produce a disequibrial outcome” (qtd. in 35). Henry Jenkins professes games to be an art form about “player control, and the best experiences arise when players perceive that their intervention has a spectacular influence

on the game” (37). Chris Crawford only sees games needing representation of an external situation, interaction, conflict, and safety (i.e. no repercussions of in-game actions carrying over into the “real” world) to be classified as such (39). Jespur Juul writes, “A game is a rule-based formal system with a variable and quantifiable outcome . . . the player exerts effort in order to influence the outcome, the player feels attached to the outcome, and the consequences of the activity are optional and negotiable” (qtd in. 40). All of these theorists’ conclusions are debatable, such as how we define and emphasize the importance of conflict or if games’ consequences and effects on players are removed from reality. In response to this complexity, Egenfeldt-Nielsen and et al. conclude that it is better to allow for subjective definitions than fruitlessly strive for a “correct” one (42). However, the authors do take all of the definitions into consideration and conclude that “matters of representation” are universally irrelevant, whereas games being defined as “rule systems” is a common thread (42). Interactivity is also an important factor since the authors consider the player’s role “to succeed” as an integral part of why people play games. While Egenfeldt-Nielsen and et al. are reluctant to exactly define what a game is, they develop a genre system “focus[ing] directly on a feature important to games: goals, and how to achieve them,” which is a succinct definition in itself (47).

I would define videogames as closed systems governed by rules, where players exercise control in digital, interactive spaces while influenced by goals that they strive to complete against differing challenges. This is assuredly a definition I would not set in stone, but it fortifies a concrete parallel to my definition of comics. The two mediums may seem improbably separated, but I have found that “space” is a conceptual link between them. McCloud writes, “Comics is a still life; mute, unmoving and passive in

and of itself . . . the act of reading comics . . . is anything but” (229). He implies here that there is a certain level of interactivity with the mental participation of the reader in sequential art and just by turning pages, but Dittmar notes how digital comics buck this conventional interactivity to possibly strike out as a “new literary form” that does not fit into comics, film, audio, or any other established genre (Dittmar “Experiments”). He writes, “With growing interactivity the intended narrative sequence and dramaturgy gets communicated less safely, as the reader turns into a user that decides on the sequence of events and even on what might happen and what not. And when that stage is reached, we no longer talk about literature, but about games” (Dittmar “Experiments”). This speculation begs the question about what interactivity means for different mediums, which will help us pinpoint what the interactivity of interactive, digital comics entails in relation to comics, videogames, and other types of digital comics.

What is Interactivity?

In regard to videogames, game designer Warren Spector said, “The word ‘interactivity’ isn’t just about giving players choices; it pretty much completely defines the game medium” (qtd in. Salen and Zimmerman 6.1). Interactivity also accomplishes different goals and changes in nature within and without digital media. New media scholars Nicholas Gane and David Beer write, “Interactivity is a concept that tends to be used to bypass descriptions of the workings of media technologies, and as a result all too often escapes sustained analytical and critical attention. . . . [T]here is more to the concept of interactivity than one might think” (87). Salen and Zimmerman avoid falling into this trap as well, acknowledging that interactivity “is one of those words that can mean everything and nothing at once. If everything can indeed be considered interactive,

then the concept loses its ability to help us solve design problems” (6.1). New media theorist and author Dr. Lev Manovich further addresses “the myth of interactivity” by arguing that calling new media “‘interactive’ is meaningless – it simply means stating the most basic fact about computers” (55). This is why Salen and Zimmerman push game designers to not ask, “*What is it?* But instead, *What can it do?*” (Salen and Zimmerman 8.2). With this deeper perspective in mind for interactivity, it should be noted that games naturally create stories when players interact with their alterable environments and objects. As Spector said, this means “games create ‘possibility spaces,’ spaces that provide compelling problems within an overarching narrative, afford creative opportunities for dealing with these problems and then respond to player choices with meaningful consequences” (qtd. in Salen and Zimmerman 26.14). Using Fullerton’s terms, “The formal game elements become narratively meaningful within the story context that the game provides,” so dramatic elements need not be present since gameplay itself can create “emergent narratives” formed by the player’s own experiences through their actions (26.22).

How do these emergent narratives specifically come about? In regard to Salen and Zimmerman, they run the whole gamut from the generic idea of there being “an active relationship between two things” with interactivity to more precise forms that more accurately convey what most people mean when defining videogames by interactivity (6.2). Videogames involve cognitive interactivity (mental “participation between a person and a system”), functional interactivity (the physical relationship one has with the control interface), explicit interactivity (“designed choices and procedures” with “overt participation”), and beyond-the-object interactivity (interacting outside an object/system,

such as with fan culture) (6.3-6.4). Just like the authors, I believe the third type, explicit interactivity, is closest to defining videogame interactivity because a player's actions are "discernable and integrated, [and] choice-making leads to meaningful play" with all sorts of emergent narratives (6.6). Most people would refer to this interactivity as allowing a player to exercise a sense of freedom or agency not found in other types of mediums. Instead of being a passive observer (e.g. watching films or reading novels), the player is active in shaping what they are experiencing in a manner that feels or is truly influential.

Manovich writes that one must recognize there are open and closed systems of interactivity, with the former emphasizing "responsive, complex, and flexible systems [that] provide users with a range of 'open' possibilities" and the latter allowing "users to choose from a limited set of strictly defined pathways" (40). While many videogames have closed systems with linear options that are predetermined for the player (which provide the illusion/feeling of unrestrained choice), others can have open interactivity similar to "a variety of approaches, including procedural and object-oriented computer programming, AI [artificial intelligence], AL [artificial life], and neural networks" (40). Whichever type of interactivity applies to a videogame, Manovich considers the medium to consist of "spatial journeys" with areas that are explored and mentally mapped out (245). When the player experiences this in videogames, "narrative and time itself are equated with movement through 3-D space, progression through rooms, levels, or worlds" (245). If this is the case for videogames, then comics could be considered spatial journeys as well since the juxtaposition of images creates a sense of flowing time. "[N]ew media spaces are always spaces of navigation," so digital comics have an even greater opportunity to relate to videogames (252).

There are two general dimensions of interactivity raised by one of the fathers of new media studies: Marshall McLuhan. He believes there are two types of mediums with the first being called “hot.” He considers books and photos to belong in this category since they are low in participation and “extend one single sense in ‘high definition,’” such as sight or hearing. Cool mediums like TV and cartoons are “low definition” and high on participation (39-40). The hotter the medium, the fewer senses and interaction it stimulates. The cooler the medium, the more senses and interaction it encourages. McLuhan’s idea of interactivity can be simplified as a physical or social interactivity requiring contributions from the user for the medium, which requires audience participation to work (39). While I disagree with some of McLuhan’s conclusions about what constitutes as hot or cool mediums, his definition is helpful to view videogames as an exceptionally cool medium since they extend almost all of the senses, demand literal interaction, and sometimes require “social completion and dialogue” on the part of the player. After all, McLuhan writes, “That games are extensions, not of our private but of our social selves, and that they are media of communication, should now be plain. . . . Games are situations contrived to permit simultaneous participation of many people in some significant pattern of their own corporate lives” (327).

In contrast to McLuhan, Manovich sees interactivity in terms of mental participation that requires someone to use imagination to fill in missing data (Manovich 56). His perspective would mean that hot mediums are highly interactive since something like a book “depriv[es] our sense of high-level or complete information. They work because they demand us to fill in gaps in visual or audio narratives, and to construct our own readings, images, or even dialogues through interaction with the medium in

question” (Gane and Beer 91). Therefore, newer media are less interactive than older media because the old “demands us to fill in more” mentally rather than in a literal, participatory way (92). Manovich and McLuhan’s views on interactivity tell us that videogames are a cool medium since they are “low definition” in the sense of not extending one sense above another. However, Manovich would argue that their interactivity could be either closed or open with mental activity. Is physical or mental participation more important with videogames? How involved must videogames be in contrast to other mediums? We must get at the heart of the interactivity of videogames with a concept called “ergodicity” that will get us closer to interactive, digital comics.

Interactivity as Ergodicity

“Ergodic” is a term developed by Espen Aarseth in 1997 that means “nontrivial effort is required to allow the reader to traverse the text” (1). This is different from other interaction with most mediums like books or movies because instead of linear experiences where all content is presented to the viewer, “you are constantly reminded of inaccessible strategies and paths not taken, voices not heard” (3). In other words, different experiences are made possible with elements of choice and, for lack of a better word, work required on the user’s part. I mentioned earlier how Egenfeldt-Nielsen and et al. categorize videogame genres based on goals, not rules or themes. The genres divide videogames into action, adventure, strategy, or process-oriented experiences, which is a minimal list compared to genre terms in practical usage throughout the games industry and culture (48-50). People often resort to a confusing mix of inconsistent categories that classify videogames according to story themes, perspectives, or gameplay, such as “survival-horror” or “first-person shooter.” This is an issue that Dr. Thomas Apperley, a

lecturer at the University of New South Wales specializing in digital media technologies, takes more seriously. Like Egenfeldt-Nielsen and et al., he coincidentally created a similar, equally numbered list of genres titled action, role-playing, strategy, and simulation. His reason for his genre set is that videogames should "be understood as layers of ergodic interactivity" engaging players with different types of interactivity that focus on the "underlying similarities rather than their superficial visual or narrative differences," which is similar to my position of defining comics by their form and parts (Apperley 9, 21).

Ergodicity can be observed in point-and-click adventure videogames where the environments are filled with elements to interact with that are not necessary to progress. By engaging none, some, or all of the environment's elements, rare few users will have the same knowledge or experience. Like point-and-click adventure videogames, Aerseth would call any similar mediums "ergodic literature" (or cybertexts), which game studies has drawn upon with good reason. He writes, "The cybertext reader is a player, a gambler; the cybertext is a game-world or world-game; it is possible to explore, get lost, and discover secret paths in these texts, not metaphorically, but through the topological structures of the textual machinery" (4). It could be argued that videogames are not necessarily texts, but ergodicity is nevertheless an intrinsic part of them:

Images, especially moving images, are more powerful representations of spatial relations than texts, and therefore this migration from text to graphics is natural and inevitable. . . . But the ergodic structures . . . are of course far from dead but instead persevere as the basic figure for the . . . genre called, by a somewhat catachresic [sic] pleonasm, "interactive games." (Aerseth 103)

The notion of interaction being non-trivial poses some nebulous assumptions. What is non-trivial? Dr. Marie-Laure Ryan, an author and teacher researching cyberculture, provides helpful answers. She distinguishes interactivity as “selective” simply by “mak[ing] use of reader input” and ergodicity as “productive” by “produc[ing] ever-new outputs by simply reacting to [the] environment without intervention from the appreciator” (Ryan 206-208). The end extremes of interactivity and ergodicity are demarcated by the intervention of human agency, so the two must be combined to form ergodic interactivity that is in between selective interactivity and pure ergodicity. The former is when “the organization of the text as a whole is static, and the result of a given query is fully predictable” like books or music albums. The latter involves “[p]urely reactive examples of electronic poetry” that are “closed systems . . . their feedback loop generates transformations without human intervention” (207-209). A piece of software programmed with systems and rules that operate independently of human interaction is a fitting example, but perhaps a clearer illustration is a deist god that creates a universe and lets it run its course without intervening. In relation to this god, creation itself could be considered purely ergodic.

Ryan considers there to be eight kinds of interactivity with (non)ergodicity, (non)interactivity, and (non)digitality, so this complexity only compounds the fact that interactivity is not an easy concept. Regardless, I would venture to define videogames’ interactivity with Salen and Zimmerman’s explicit interactivity combined with Aerseth’s ergodicity to form explicit, ergodic interactivity. It emphasizes the role of the player in playing a meaningful part in the formal (and perhaps dynamic) elements of a game-like piece of media while allowing for Manovich’s closed or open interactivity. As long as

there is a sense of Aerseth's non-trivial effort involved to encourage a sense of influence, then explicit, ergodic interactivity is a possibility.

Pushing The Boundaries of Comics' Interactivity

How can the aforementioned varieties of interactivity largely associated with videogames have anything to do with comics? In their traditional, print form, it is safe to say that McLuhan would consider them to be a mildly cool medium. They contain "little visual information or connected detail" that the viewer has to construct, since they have a "participational and do-it-yourself character" (225). Ergodicity is non-existent in these comics' interactivity, unless there are stories with multiple, printed endings that the reader must choose between, which McCloud inadvertently gives an illustration of with a comic that has multi-directional pathways, but his example is largely impractical and uncommon due to the limitations of print (McCloud "Understanding" 105). As Manovich would likely say, comics do invite a highly mental participation to visualize three-dimensional spaces, complete motion between panels, and imagine sound, but the only type of literal interactivity involved with comics is flipping pages. These assertions would classify comics (using one of Ryan's eight forms of interactivity) as "[n]onergetic, nonelectronic, noninteractive texts. Standard literary texts, in which the dynamic construction of the text that takes place during the act of reading concerns meaning exclusively" (207). As comics have become digital, the vast potential for new interactivity and ergodicity has largely been ignored. I believe McLuhan would compare this trend and its consequences to how modern societies have altered how they feel toward hot mediums. He writes, "In terms of the theme of media hot and cold, backward countries are cool, and we are hot. . . . But in terms of the reversal of procedures and

values in the electric age, the past mechanical time was hot, and we of the TV age are cool” (43-44). What McLuhan means is that too much hypermediacy with technology can promote a backwards trend toward desiring immediacy with hot mediums, since they are more appealing and immersive in a subjective sense compared to a saturation of cool mediums that create boredom.

One cannot help but think of Kirchoff’s criticism of digital comics becoming a retro technology, which makes traditional, print comics (being objectively “hotter” than digital comics) *feel* cooler. It is an effect that has happened with digital versions of print comics as a result of technology’s overall effect on physical mediums. We desire “hotness” with digital comics when the potential for a revitalizing “coolness” is possible with interactive, digital comics. This shift in desire would not be to “‘rescue’ print comics,” but to “fulfill the potential of *digital* comics” (Kirchoff). Interactive, digital comics are like a medium of comics unto their own, straddling a line between McCloud calling them an evolution of comics and Dittmar suggesting they are probably another medium entirely. Interactive, digital comics are not traditional, print comics nor are they wholly removed from being comics as a separate medium. They are somewhere in-between, and Ryan captures this middle ground by using McLuhan’s terminology to pinpoint types of media that are similar in nature:

To expand the expressive power of media, we need to cool down those that are naturally hot and heat up the cold ones. . . .VR, multimedia CD ROM art, navigable VRML pictures, animated screens sensitive to the movements of the cursor, click-and-open windowed displays on the Internet, and walk-through electronic art installations are all attempts to intensify the experience that

McLuhan calls participation by making the spectator ‘work’ for the next image rather than passively witness a steady flow of pictures, as in film and TV. (Ryan 348)

The variances in interactivity between comics and videogames is clear, but to understand how they could interrelate and come together as interactive, digital comics, remediation’s role in their formation is necessary to establish.

The Perceptual Link Between Comics And Videogames

Dr. Betty Li Meldgaard wrote her doctoral thesis on the affordances of space in videogame design. She covers how “onscreen object manipulation can be said, on a rudimentary level, to be what video games are all about and eventually the crucial factor that separates video games from other visual media,” which is rooted in a desire to make videogames navigable as spaces of traversal (17). She believes that videogames welcome participation based on what they convey visually in response to players interacting with digital environments to create “a sense of motion and locomotion” (226). Therefore, videogames should be “understood as games of seeing or seeing games” (266).

Egenfeldt-Nielsen and et al. advocate that videogames should not be divided by varying perspectives the player can assume, but should be classified by “the point of perception – the point from which the player perceives the gamespace” (129). Meldgaard extends the authors’ conclusions by asking whether or not videogames should be considered “pictorial or visual media” in light of their unique perceptual qualities (270). Indeed, other theories based in visual media are experienced and perceived in different ways when compared to the “interactive imagery and game world encounters” of videogames (268). This oversight is why she addresses Gibson’s theory of perception, which accounts

for a participant's interactivity in an environment, similar to a constructed videogame world. Interactivity is not considered in other pictorial theories of perception, so using Gibson fills in the gap to address "the interdependence between player and game world layout, that is, the simulation of moving images together with a moving observer" (Meldgaard 272). The videogame is still regarded as a visual medium, but this perspective accounts for the player as an interactive perceiver (i.e. a player).

Since comics are a sequential, spatially arranged medium of images and words, is it fair to say that perceptual theories should be applied to them as well in how they can be designed and experienced? Comics are not so different than videogames since they explore the limits of space with pages and how their elements are interrelated and placed across pages. Dittmar writes, "In comics, the images not only work individually but also in combination: Each new page is a new experience of the images in combination and individual images and combination of their designs. . . . Decisions about the number of images, their placement and style, are crucial for the storytelling of each comic" (Dittmar "Digital" 84). How videogames explore space compared to comics normally diverges in how much more design freedom they afford as an exclusively digital medium with player agency, but digital comics implement the spirit of videogames' navigation and traversable nature with the aforementioned digital substances (i.e. software, tools, devices, etc.) and reshape how viewers receive a comic through, say, branching stories and panels that move in three-dimensional space. Elements of explicit, ergodic interactivity through game design could mechanically coalesce with the themes of and intent behind the parts and layouts of comics. Does this mean comics can be experienced in such a way that the viewer comes to associate certain elements of comic design with

game design? If the two were to meld together in the single environment of interactive, digital comics, then the answer is yes:

It is believed that when we look beyond the surface and disregard, at least momentarily, what is represented in the game world, we gain knowledge about the operational mechanisms and the perceptual involvement in tasks to be overcome, such as doing the same things over and over again in order to change the optical structures in an advantageous way. (Meldgaard 277)

Instead of comic parts alone being the “operational mechanisms” that readers perceive behind interactive, digital comics, game design elements also become one of the perceived mechanisms. Perhaps the same experience players have with videogames in this regard can be accomplished with the “surface” of comics. This is a line of inquiry that the aforementioned Laurie Taylor follows with provocative reasons for this hypothetical becoming a reality.

The Thresholds And Space of Comics And Videogames

Taylor echoed my own surprise with conducted research on comics and videogames. “While drawing connections to comics and video games may seem grossly evident, much of the current research on new media and video game . . . has largely neglected comics in discussions of hybrid media" (1). In response to this dearth, she demonstrates how the two mediums can be uncannily close in representation and goals. An example is while videogames usually mimic film by focusing “on the center of the screen,” sometimes the perspective relies on anticipation and sequential construction with “thresholds” that are a staple of comics with the gutter and frames (3):

The use of threshold points in video games is cinematically linked in that camera angles and views are reoriented during a single scene, but the repeatability of the movement to, and back over, a single threshold point is much more like reading a comic book, because readers are not set to one way of reading or viewing the panels and the visual layout of the comic panels often cue the reader to read in non-sequential ways. Similarly, video games require players to re-cover or re-trace certain spaces in order to continue the game narrative. (Taylor 7)

The game series she examines called *Resident Evil* is known for camera angles that function like the reading of a comic, since playing the games involves retracing and even a spatial construction of time “because the camera views switch as single screens have threshold points which, when reached, change the view – often drastically altering the view from one angle to a complete reversal. This changing of perspective is common from panel to panel in comic books” (16). These similarities have to do with videogames and comics sharing a narratological goal: the exploration of space. Comics are primarily sequential while videogames are spatial, but Taylor believes both mediums can share these logics. She writes, “[C]omics can be read in different sequences spatially for the panels on the page, as video game areas can be explored in differing sequences, but that the overall movement of comics and video games still most often follows a sequential narrative with this underlying spatial interactivity” (2). Videogames and comics have similar storytelling methods with the use of thresholds and demarcated spaces, which are varying viewpoints of a space that have to be mentally pieced together to understand the whole (9). Videogames are often designed to have players revisit old areas to access previously locked rooms or find a clue to a missing puzzle that was in plain sight before.

The player is then engaged in “constructing a mental ‘map’ or an abstraction of the relationships in space between objects, characters, etc. in space,” which is something both comic and game producers stress, respectively, in the construction of panels and level design. She writes, “Panels and frames in comic books act the same way that thresholds in video games do; the movement through space becomes also the movement through time” (11). Both mediums allow their viewers and players to roam free, if you will, with how the comic is approached visually or the videogame playfully.

Moving back to discussing ergodic interactivity, how should it be applied to digital comics? This interactivity does not have to be emergent, constant, and filled with choice. Simple, closed systems are also acceptable as long as the illusion of a distinct, free experience is maintained. Hyperlinks to different sources, animation, sound effects, music, and contextual “point-and-click” elements can be embedded in a digital comic for navigational purposes. Citing digital artist George Legrady, Kirchoff writes, “the outcome may be fixed, but how the reader experiences that outcome – and the events that lead up to that outcome – will be different for each reader” (Kirchoff). With this in mind, digital comics could integrate different endings and experiences for readers. Multiple narratives are possible because these comics can emulate hypertexts with multi-layered narratives if they “contain some kind of information feedback loop A reader peruses a string of words, and depending on the reader's subsequent actions, the significance of those words may be changed, if only imperceptibly” (Aerseth 19).

Physical books such as R.A. Montgomery’s “Choose Your Own Adventure” series contain ergodic interactivity since readers can decide how the story goes. How much more are digital comics able to do so, especially if Gerard Genette’s theory of

hypertext is applied to them. Digital comics as hypertexts would mean they should extend their material, which can be applied by visualizing the scope of their layouts beyond pages alone, perhaps considering three-dimensional space as well. Expansion is a part of hypertexts that could enhance multimedia to create meaningful interplays between symbols and images in digital comics. Lastly, hypertexts are about augmentation to provide extra narrative or developmental content with hyperlinks leading to the periphery of a comic's boundaries or going beyond them. However, these strategies are not meant to “*replace* the print text, but are rather used to *amplify* the printed text” (Kirchoff). With explicit, ergodic interactivity in the mix as well, digital comics can integrate “non-trivial reader participation, rely on a labyrinthine structure, and [offer] readers an opportunity to dictate (or at least influence) the outcome.” The resulting product is interactive, digital comics: a reformation for how readers can experience and understand comics anew.

A Convergence of Mediums

Very few digital comics have dared to straddle the middle ground to become interactive, digital comics. It is difficult to achieve because most stray too far and become videogames, whereas others safely remain content to reject a hypermediated approach. Other digital comics come close as multimedia experiments, but they do not significantly stretch the boundaries of interactivity or morph the traditional ways in which comics are experienced. However, I believe it is important to understand that comics have always been a rebellious, experimental medium. Their eccentricity could be compared to the parallel that Sean Fentry and et al. draw between the Underground Comix movement throughout the 1960s and 1970s and the evolution of web comics. The former was a “subversion of comic book conventions and [a response to] freedom of

expression in content and form” by revolting against comic publishers’ rigid stances against mature and graphic themes (1, 3). Likewise, since the digital space offers so many affordances, creators can experiment with new ideas outside the traditional boundaries of the mass industry (2-3, 5). The authors’ final remark that “webcomics are the continuation and remediation of a revolution which has already begun” (22) has the potential to be more pronounced with the evolution between digital comics and interactive, digital comics. What makes the latter unique is their intimate connection to videogames that should be embraced with meaningful remediation.

Stacey Church, an undergraduate student at the University of California during the time of her essay’s publishing, adapts Bolter and Grusin’s concept of remediation to account for the act of remediating books in *Remediation and Video Games: Bookwork in Dragon Age: Origins*. She calls this process “bookwork,” which is “the narrowly defined idea of the book [being] simulated and/or transformed in its remediated context” (1). She takes the videogame *Dragon Age: Origins* into account and how it recontextualizes the design, appearance, and function of books for its game world. The Codex is one such example, which is a menu interface that be clicked and scrolled through with various types of lore entries. However, it looks like an ancient novel to fit within the medieval world of the videogame:

In the game, a book is a linked data network whereby flipping pages is replaced by pointing and clicking, which underlines the wishful expectations of the non-game book object as equally functional. Yet the game holds on to a simulated aesthetic that recognizes the culturally inflected units of a book sans text: pages bound together to make a cohesive, yet dynamic, whole. (Church 3)

She says there is a paradox with The Codex. It has an aesthetic retainment of the design and style of old books for immediacy, but since it has been “updated for operational purposes,” it is also hypermediated since it can be interacted with like a folder on a computer. This bookwork is similar to stylistic remediation, and it is essential to apply to old mediums in their transitions to the digital realm. I would like to extend her terminology to advocate that “comicwork” should be applied to how interactive, digital comics can be created. I do not believe the goal is to remediate elements of comics within videogames, but to remediate elements of videogames within comics to emphasize and change the old medium in the new one. I raise *The Witcher 2 Interactive Comic Book*, *Metal Gear Solid: Peace Walker*, and *Murat: Non Stop Bar* as demonstrations in the following chapter to show where interactive, digital comics have already gone and have yet to go. The current state and potential of them could unlock the illusive language bridging videogames with comics to explore spatial, sequential, and interactive possibilities that only the digital frontier can entertain. The aforementioned scholars have laid the foundation of how digital comics relate to English, comics, and game studies, so I cannot ignore fostering their invaluable contributions as I build upon them to explore how interactive, digital comics can expand our understandings of interactivity, remediation, videogames, and comics.

Chapter 3 – Issue by Issue – Understanding And Analyzing Digital Comics

Remediation is not a simple process of realizing old media in new forms of media. To speak in more allegorical terms, retro remediation and adaptation are two ends of a lined spectrum. Stylistic remediation is in between these two points, and when any given media artifact moves closer to retro remediation on this spectrum, the presence of the old media is decreased in the artifact. On the other hand, the presence of the new media is strengthened if the artifact moves toward the adaptation side. This illustration gives us a way to understand digital comics' diversity since they would be scattered from left to right on the spectrum with differing quantities of multimedia and interactivity (or a lack thereof in some cases). As I wrote in Chapter 2, Dittmar understands this diversity within digital comics because they can “define their own format” (Dittmar “Digital” 87). “Digital comics” is too inclusive and simple as a generic term for the medium.

Some [digital comics] will [have] long juxtaposed or meandering sequences as suggested by McCloud, others will form new kinds of a pictorial medium that may contain comics as one of their narrative elements, and some will present truly multimedial storytelling demanding different forms of activity and participation by the readers, blending prose texts, poems, film, and game elements into the comic. These will be very different from the stories we refer to as digital comics now (89-90).

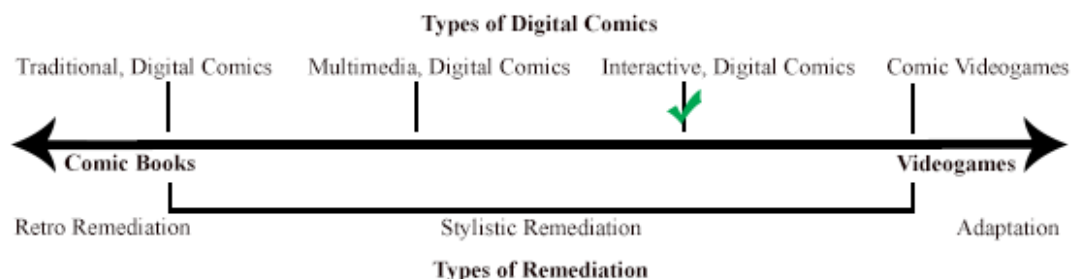


Figure 1. This is the spectrum of remediation in relation to the genres of digital comics. “Interactive, digital comics” is the paradigm of stylistic remediation.

In other words, digital comics cannot be put in a box. There are digital comics that make McCloud's infinite canvas a reality with sprawling panels, and there are others that incorporate game design and multimedia to make the reader feel like an influential participant. Rather than sweep a spectrum of digital comics under this name alone, the medium's diversity deserves to be reflected in specific genres of digital comics that correspond with the illustrated spectrum of remediation. In doing this, I can appropriately classify which digital comics are most like comics and most like videogames by building a framework of reference with "Traditional, Digital Comics," "Multimedia, Digital Comics," and "Comic Videogames" to discover where "Interactive, Digital Comics" should be placed on the spectrum (see fig. 1). I will then conclude why interactive, digital comics are the most innovative genre emerging in the medium of digital comics in relation to the others.

Traditional, Digital Comics

The genre of traditional, digital comics consists of digitized print comics that undergo retro remediation. With the exception of losing their tangible materiality and offering some minor digital features (i.e. zooming in on panels, skipping multiple pages with the touch of a button, etc.), they are designed and read just like a "normal" comic. Whether they are presented on smart phones, tablets, or the web, these comics' presentation and design remain glued to usual comic conventions with static imagery and traditionally sized "pages" on the screen. While most of these comics are direct carbon copies of issues already made for print, some are exclusively made for digital formats and *still* do not take advantage of any affordances. However, there are types of these comics that touch the surface of what is possible, and one example is *Overwatch Issue #7*:

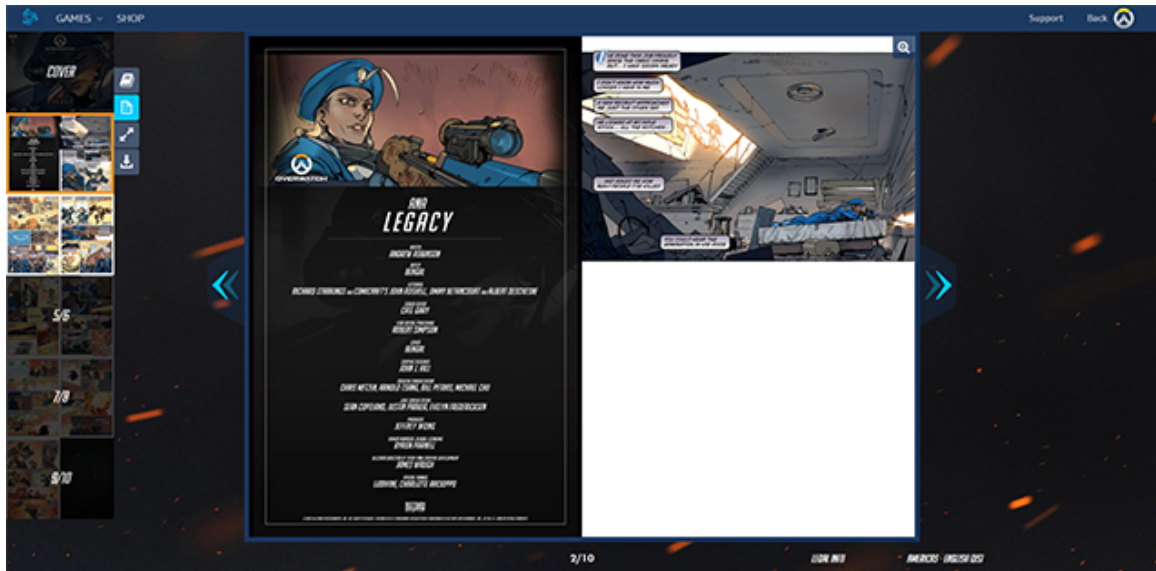


Figure 2. Individual frames will appear when clicking on the blank, white pages. (Robinson)

Legacy. It is a traditional, digital comic that users can download and scroll through with simple swipes in a PDF format; it would be like making scans of a print comic and transferring the pages to read on a computer. On the other hand, the hypertext version on Blizzard Entertainment's *Overwatch* website presents more options to enhance the reading experience. A user interface can be accessed on the left side of the web page that can be used to access previous or new issues, a full-screen mode, a download link (for the PDF version), and a column that allows readers to any page he or she desires. In addition, if the reader clicks on the pages themselves, individual frames will fill in blank, white pages as opposed to every frame showing up at once with new pages by clicking the forward and backward arrows below the comic (see fig. 2). What makes the former option interesting is that it can prevent confusion about which frame is next in the intended reading sequence, which takes away some of the reader's autonomy to mentally construct the sequence on his or her own. While the reading experience is made more convenient with these options, they do not alter the artwork, writing, or layout.

Considering that this comic series is not available to purchase physically, its origins are digital despite being seemingly made for print.

However, there are traditional, digital comics that stretch the boundaries a bit more, and Marvel's *Infinite Comics* are a good demonstration. This line of digital comics was announced in 2012, and it was promising to hear Dan Buckley, publisher and president of the print, animation and digital divisions for Marvel Worldwide, say, "We see print and digital product as complementary, not competitive." The first *Infinite Comic* was *Avengers vs. X-Men #1*, which he said would lay the groundwork for "a new comic book format" that would "[take] advantage of modern technology while staying true to [the] medium's greatest strengths" (Esposito). However, the results and continuation of this experimental offshoot did not pan out to be as grand as Buckley stated. The *Infinite Comic* in question follows young superhero Nova as he flies through space, trying to reach Earth to warn the Avengers of an apocalyptic, cosmic entity called the Phoenix Force. The web/tablet comic tantalizingly beckons the reader as they click or swipe through the first pages, which reads, "Are you ready for the future of comics at your fingertips" (Waid)? The text comes up over three separate pages, and each one has the same backdrop with one star increasing in brightness, which turns out to be Nova flying toward the viewer on the fourth page. This hints toward the type of art to come in the issue and how it is presented differently from a traditional comic. Instead of two pages with various panels and frames to look over depicting the same settings several times over, only one or two big panels are presented at a time. How this works is that these big panels will retain the same backdrop if the scene is not drastically changing, making it feel more consistent (see figs. 3 and 4). Word bubbles and internal dialogue are also

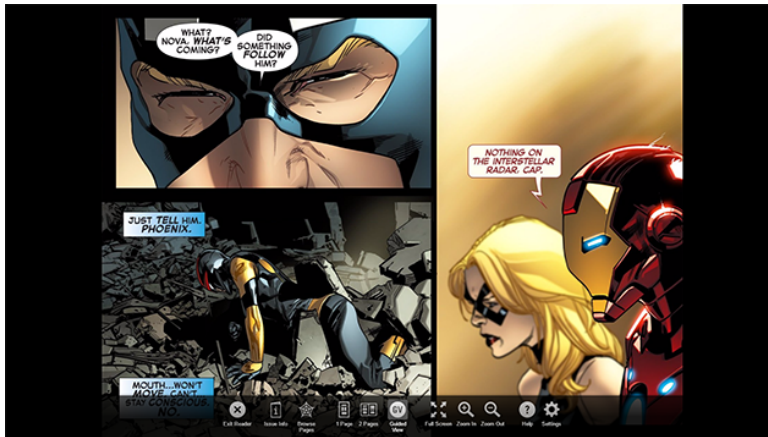


Figure 3. The same layout is presented in the next panel (see fig. 4) with slight alterations. (Waid)

particular characters who are talking, which is one of the techniques McCloud suggests

digital tools can implement to affect how readers interpret the feeling of a scene

(McCloud “Reinventing” 146).

All of the same digital options are present from the *Overwatch* comic, such as zooming in on panels and skipping pages, but there are a few more to experiment with here. To name a couple of these options, the reader can alter the transition speed of pages or alternate between the standard print version and the *Infinite Comic* version (though the latter feature is not available with this particular comic since it was only made for digital). The most notable aspect of this issue is fading transitions that act as a minimal sort of animation, which makes it seem like Captain America is opening his eyes or Nova is falling to

brought up on the screen one at a time, and some frames are zoomed in on as the reader progresses to indicate increasing tension with a scene. A blurring effect is used to emphasize

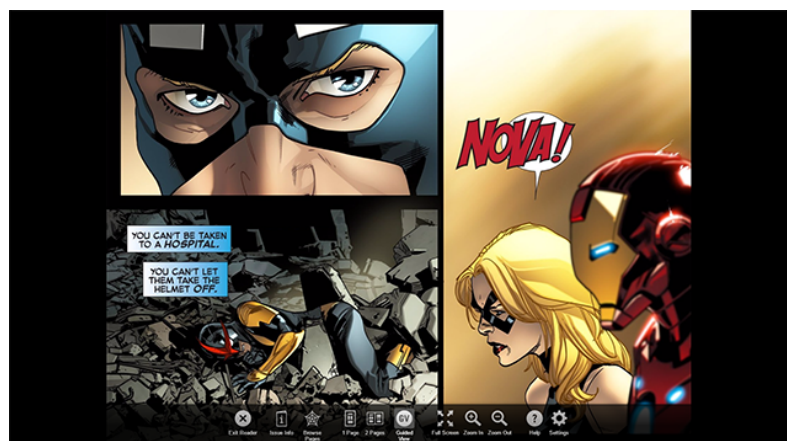


Figure 4. The blur effect is applied to Iron Man to bring attention to Ms. Marvel, since she is shouting on the right side of this page. (Waid)

the ground when the page is turned (see figs. 3 and 4). Overall, Marvel's efforts to extend its reach into the digital sphere are commendable with *Infinite Comics*, but considering they have publically fallen to the wayside without any interest from the company to do more with these comics, they remain stuck in a form of retro remediation. The name itself calls the infinite canvas to mind, but these comics do not live up to the concept. With this example, I am reminded of Eisner's comments on the comic industry's stringent practices that have been ingrained by societal expectations of the form. He writes, "Often [the artist] is confronted with a choice between the design or impact of the page and art versus the needs of the story. I regard this as an inherent problem because . . . the integrity of the storytelling is compromised. . . . The need for the artist to display artistic prowess even to the detriment of the story is quite irresistible" (93). In the same vein, traditional, digital comics are carbon copies of print comics or comics exclusively made for digital that seem made for print. They are kept back by a focus on immediacy with retro remediation.

Multimedia, Digital Comics

Multimedia, digital comics is where stylistic remediation starts to become evident. These do not implement explicit, ergodic interactivity, but do contain ranging mixes and quantities of audio, animation, and the like. As McCloud has stated, these elements have traditionally been used with an additive approach that do not thoughtfully challenge or work together with the comic art form, but more recent multimedia, digital comics have started to prove otherwise. An alternate version of *Overwatch Issue #7: Legacy* made by the Madefire studio is a fitting example that takes the original pages and re-imagines them with music, sound effects, and limited animation to create a *Motion Book*. Like *Avengers vs. X-Men #1*, zooming and blurring techniques are used to change the pacing

of the traditional reading experience, but what makes this *Motion Book* special is how panels move around and overlay each other as the reader progresses through the comic. When analyzing an identical page from the traditional, digital comic version (see fig. 2), the other version (see fig. 5) has panels laid side by side with multiple visual effects. Previous frames that have already been read are partially blacked out, whereas the current, bottom-left frame of Ana Amari shooting her Biotic Rifle moves downward diagonally once the reader swipes to the next panel. Once the frame stops moving, the next panel reveals a soldier being hit. This movement and a shooting sound effect provide a sense of how much time it takes her to make the shot, having drastic effects on how the reader imagines the event.



Figure 5. Dialogue influences the coloring, blurring, and motion of individual frames. For example, as Ana thinks to herself about her past, the soldier panel turns black and white to emulate a sense of timelessness when the next dialogue box comes up. (Robinson)

There are other subtle effects added to this page, such as a glint in Ana's eye that appears when she is ruminating over how her "cybernetic eye makes my vision six times greater than normal" (Robinson).

The reticle in the preceding panel also moves upwards to

the soldier's head to indicate Ana's moving scope, and other sound effects such as the sound of the bullet striking the soldier and environmental ambience are noticeable as well. Music from the *Overwatch* videogame also changes across pages depending on the

mood established by the art and/or dialogue, ranging from being rueful to action-packed electronic, orchestral music. Individual elements like a pack of drones or bullets zipping through the air are animated. A parallax effect also isolates individual objects in the environment of a big frame, so when the perspective moves across it, objects move at different speeds in relation to the perspective's position (see fig. 6). These multimedia effects among others in this *Motion Book* can only do so much, since it is based on the original, static version of the *Overwatch* issue. Despite this limitation, Madefire changes the relationship between

panels with how they stack and move around, and new effects increase the intended messages or expression of the artist and writer's work. This digital comic integrates multimedia affordances

more than most, which can be specifically identified by

applying two of Genett's three aspects of hypertext: extension (i.e. imagining comic layouts in a new way) and expansion (i.e. the usage of sound, animation, etc.).

While multimedia, digital comics do not incorporate any videogame-like interactivity, they can push multimedia to its fullest limits for stronger forms of stylistic remediation. *Metal Gear Solid: Digital Graphic Novel* is an apt example that was released for the PlayStation Portable videogame handheld system. Strangely enough, it is



Figure 6. The panel sweeps to the right as Ana describes each character, and their movement in relation to the center figure varies due to the perspective and their distance from him. This effect gives a sense of three-dimensional space in a once static frame. (Robinson)

not a videogame, but a fully animated digital comic adaptation of the original *Metal Gear Solid* videogame's storyline. *Digital Graphic Novel* takes the videogame's cutscenes and gameplay, visually adapting them into sequential panels and static art that is then animated by other artists. No interaction is required on the reader's part either, not even touching the screen or pushing buttons to progress to other pages; the comic "plays" on its own like an animated film. It could be argued that *Digital Graphic Novel* is not even a digital comic, but rather an animated film. For the purposes of this study, though, it is considered a multimedia, digital comic due to its hypermediated reliance on the comic art form (see fig. 7). Panels similarly stack and move around like in Madefire's multimedia version of *Overwatch Issue #7: Legacy*, but what makes *Digital Graphic Novel* special is how it would be impossible to reproduce in print. For example, sometimes there are no drawn borders around artwork since the borders of the PlayStation Portable's screen act in their place. There are also frames that apply a three-dimensional effect to the artwork where the perspective will slowly revolve around a character. Instead of word bubbles alone, voice actors read the dialogue as it shows up alongside the art.



Figure 7. This sequence is hard to capture, but it shows panels folding out from left to right, depicting the protagonist diving into a roll. Fully animating the roll seems more practical, but comic design is deliberately implemented to simulate this action. (Kojima "Digital Graphic Novel")

A particularly noteworthy design choice is a large piece of artwork with the protagonist shooting a group of enemies. While the artwork is mostly static, the perspective erratically

jumps to various sections of the art with accompanying sound effects (some from the videogame) as the protagonist shoots all of the enemies. These effects provide a temporal illusion of each enemy being shot individually, despite the fact that the art represents a single moment in time if viewed in full. This could be viewed as a paradoxical combination and balance of temporal and spatial storytelling because of multimedia. As I mentioned before, the art is drawn statically in sequence to allow for major changes of perspectives and movement, but minor things such as a character shrugging or aiming a weapon are animated to avoid repetitive frames; onomatopoeia like “bang” from firearms shake and fade away as bullets are fired. These are incredible affordances of the digital space that the *Overwatch* comic boldly attempts to integrate, but Kojima Productions’ *Digital Graphic Novel* was made from the ground up to truly surpass an additive approach. All that is left is to apply interactivity to make interactive, digital comics, but this attribute can be implemented too much with comics becoming videogames.

Comic Videogames

I consider videogames to be closed systems governed by rules, where players exercise control in digital, interactive spaces while influenced by goals that they strive to complete against differing challenges. *The Walking Dead: A Telltale Game Series* and *Injustice: Gods Among Us* were provided as previous examples of videogames that adapt the worlds, characters, and stories of comics, but not the form. This is what comic videogames are like, but that does not mean they are incapable of demonstrating the form with hypermediacy, such as the 1995 videogame *Comix Zone* (see fig. 8). It follows the tale of a comic book creator sucked into his own creation that he needs to fight his way out of back to the real world, which is a similar premise to *Unbound Saga*. The levels are

represented as separate panels that the player's character swings across or jumps down into to progress. Punching and kicking are accompanied by onomatopoeia and dialogue by word bubbles.

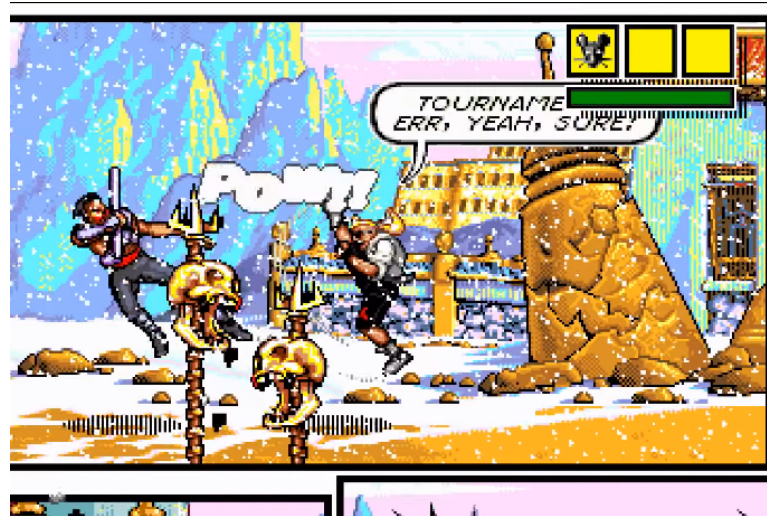


Figure 8. Comic and game design merge with *Comix Zone*. Level design emulates comic panel arrangements; game mechanics are associated with comic parts, and so forth. (Sega Technical Institute)

While stylistic remediation

is present in *Comix Zone*, it is primarily a videogame that implements comic imagery as an aesthetic built around game design. However, one could argue with my conclusion that *Metal Gear Solid: Digital Graphic Novel* is a digital comic. After all, it runs continuously like an animated film, so should it not be classified as such? I believe it is built around the stylistic remediation of the comic form rather than attempting to be like an animated film first and foremost, so it is primarily a digital comic. On the other hand, *Comix Zone* is designed around the experience of a videogame.

If the player does not engage the controller, the character will not move and the edges of other panels in view will remain hidden. Total agency is demanded for anything to occur. Enemies also pose challenges that whittle down the character's health, which can result in losing and needing to restart the experience. Rules also govern what abilities players can use and limit where they can go. With players having the option to jump between a set of panels (branching pathways) or summon a rat to scavenge a panel for hidden items (which the animal will acquire by making small tears in the comic

environment), clever tricks like these brilliantly play with how comics and videogames can intersect in terms of design. The problem is that *Comix Zone* primarily uses comic design and elements as an aesthetic in favor of the videogame medium; adaption is stronger than stylistic remediation. While this may be true, comic videogames are incredibly useful to visualize what interactive, digital comics can do in their stead to prioritize the medium and experience of comics over videogames.

XIII is an example of how powerful the connection between comics and videogames can be by demonstrating how naturally comic design can complement and enhance the videogame experience. While this spy thriller's story premise has nothing to do with comics, it is visually inspired by the medium. The videogame's main menu user interface is arranged like a page in a comic. Onomatopoeia represents the sounds of enemies walking with multiple "Taps" and explosions with "Blam." The artistic direction mimics a general comic book style with heavy outlines and cel-shaded graphics as well, but the most surprising use of comic imagery is seen during gameplay. For example, the player assumes a first-person perspective, but his or her perception is extended when



Figure 9. As the player is in a house surrounded by grunts, a panel shows up to reveal where some of them are coming from. This newfound perspective gives the player spatial information to create strategies for how to kill them. (Ubisoft Paris)

panels will appear on the left, right, or top of the screen to provide an additional perspective during certain situations. This is used for showing an item the player has picked up or to give a

beneficial view of enemies that might be around the corner so he or she can plan ahead (see fig. 9). Due to the temporal nature of this videogame with constant player input, it could be compared to the remediation of comic book panels in the *Hulk* film. This is seen in how the screen will sometimes split into two or four perspectives at once in the movie, showing multiple characters in different places divided by borders. However, as Morton observes, this multiframe “is the product of a media specific, formal, compromise. . . . Rather than giving us two images portraying separate instances of time (or space) as a comic book would, [the director] gives us two images of one space that are taking place simultaneously” (81-82). In other words, the *Hulk* film merely imitates the aesthetic of comic frames rather than their function to convey spatial storytelling. However, there are shocking instances where multiframe in *XIII* break this trend, such as with the visual dramatization of killing some enemies (see fig. 10). If the player manages to get a headshot with a crossbow, the enemy’s demise is depicted with a row of static frames, layering on top of the first-person perspective to show him falling to the ground. These remain on the player’s screen while moving around in real time, so there is a conflict of spatial and temporal imagery at once. This is a profound breakthrough in the intersection of comics and videogames,

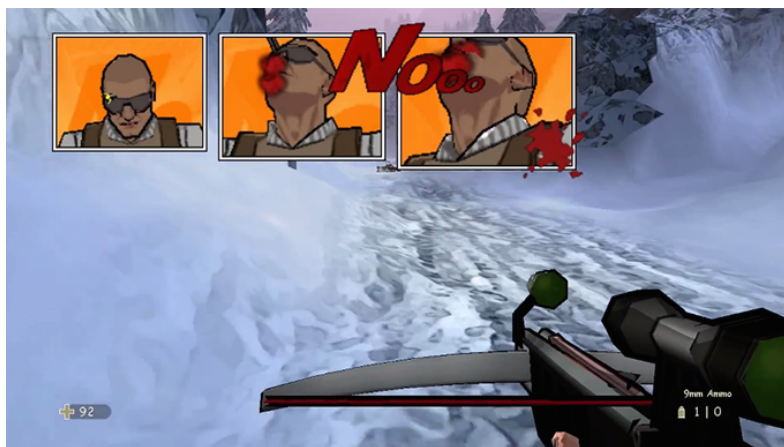


Figure 10. These panel images are pre-made in *XIII*, but they could be generated in real time to not only be spatial montages, but also provide information about enemies’ current positions. In other words, killing a specific enemy could be a strategic element to bring up these panels to see where other enemies are located, such as in fig. 9. (Ubisoft Paris)

which emulates what Manovich advocates for film with the concept of “spatial montages.” He writes, “The logic of replacement, characteristic of cinema, gives way to the logic of addition and coexistence. Time becomes spatialized, distributed over the surface of the screen” (325). Morton says that the *Hulk* film has a semblance of spatial montages, but *XIII* truly realizes this concept as a comic videogame.

Interactive, Digital Comics

The comic form applied to game design is exceedingly worthy of further study, but rather than remain in the domain of videogames and game studies alone, there should be an opposite focus benefitting the comics medium because we should not only analyze how comic design works when constrained to the limits of a videogame. For this study, it is more essential to understand how game design works when constrained to the limits of a comic. This focus brings about interactive, digital comics, and it is a digital comic genre that can profoundly change how the comic medium is experienced without losing too much of the comic experience as seen in comic videogames. If we think of interactive, digital comics in terms of the spectrum, comic videogames are too far to the right as adaptations, whereas multimedia, digital comics do not reach far enough to incorporate ergodic, explicit interactivity. To strike this balance, the three following samples of interactive, digital comics are quintessential illustrations that incorporate meaningful choices and control with digital comics.

For those who would debate that any interactivity beyond turning pages cannot be applied to digital comics without turning them into videogames, I believe a fitting analogy can contest this with a guest column in Fullerton’s research into game design. She writes about the conflict between narratives and interactivity in videogames and how

crafting stories that emerge from gameplay rather than preexisting structures is a difficult challenge for game designers. Jesse Schell, the CEO and chief designer at Schell Games, complements her concerns with his opinion about whether or not interactivity dramatically changes how stories are experienced. He is worth quoting at length:

The idea that the mechanics of traditional storytelling, which are innate to the human ability to communicate, are somehow nullified by interactivity is absurd. It is a poorly told story that does not compel the listener to think and make decisions during the telling. When one is engaged in any kind of story line, interactive or not, one is continually making decisions. . . . The difference only comes in the participant's ability to *take* action. The desire to act, and all the thought and emotion that go with that, are present in both. . . . The way that skilled interactive storytellers manage this complexity, while still using traditional techniques, is through the means of *indirect control*, using subtle means to covertly limit the choices that a participant is likely to make. This way, masterful storytelling can be upheld while the participant still retains a feeling of freedom. For it is this feeling of freedom, not freedom itself, which must be preserved to tell a compelling interactive story. (qtd. in Fullerton 102-103)

Schell's wisdom is the groundwork that interactive, digital comics should adhere to in their design. Explicit, ergodic interactivity can involve complex rule systems where the player is constantly in control, making decisions that unpredictably shift the direction of enemy encounters or the story. However, interactivity does not have to be this emergent and advanced if there are *feelings* of influence and freedom. This illusion is the dividing line between Manovich's closed and open forms of interactivity. Comic

videogames are produced with an emphasis on open interactivity, but with closed interactivity, the gateway to interactive, digital comics is opened because the user remains a reader but *feels* like a player as well.

The Witcher 2 Interactive Comic Book is a wonderful example. Based on the videogame series that is subsequently based on the book series, the user follows Geralt of Riviera on another one of his contracted missions as a Witcher (i.e. a warrior who has mastered sorcery). He has been tasked to kill a mythical beast called a Leshy. Before he stumbles upon the monster halfway through the comic, he is depicted preparing to fight. There is a panel of him moving into the frame while surveying the land, and once he comes to a halt, a prompt appears with a downward arrow for the user to swipe on. Upon completing this action, the panel is suddenly obscured by another two that drop down from the top screen, showing Geralt sitting down. The action in the artwork mimics the motion required by the reader, making it seem as though the reader influences Geralt. This is even more prominent near the comic's beginning, which displays two lovers sneaking into a forest. Once they settle down near a fire, a panel appears from the perspective of the male peering at his girlfriend. The user is then prompted to swipe down several times on her dress, which slowly falls off her body to reveal the corset underneath. The act of swiping through pages is now grounded in the artwork, which means that the latter can be surprisingly designed around devices' functions.

There is an even more involved form of interactivity once Geralt is shown fighting a feline ally of the Leshy (see figs. 11 and 12). When it attacks Geralt, swiping right shows him dodging behind the beast. When the player swipes down after this action, the backdrop remains the same, but the static rendering of Geralt holding his sword high

is switched out with another where he is slicing downward into the feral cat. It is a similar transition technique to the one described in *Avengers vs. X-Men #1*, except there is no fading between other panels since animation is used in *The Witcher 2* comic. The issue even remediates magic spells called “Signs” that players can use in the videogame *The Witcher 2: Assassins of Kings*. The “Igni” Sign is activated by pressing a button to throw a fireball, but the comic has the user calmly trace the shape of the Sign to use the fireball in the next panel. While this only occurs twice in the digital comic, it is fascinating to consider how this videogame-like action has contextual relevance to the artwork and story’s direction. There is no alternate path or fail state if the user does not trace the symbol correctly. He or she simply needs to get it right to move onward.

There are other interesting quirks such as a “swoosh” sound when panels slide on the screen. It is the only sound that is set apart from the rest of the audio that attempts to



Figure 11. When Geralt engages the Leshy's feline ally, the prompt matches the action that Gerlat is performing, technically turning the page. (CD Projekt RED S.A.)



Figure 12. This page appears after the one in the previous figure. Once the user swipes downward, the next page shows the beast with a gash. (CD Projekt RED S.A.)

immerse the player in the world itself, which is thematically and logically tied to depicted actions and scenes. However, “swoosh” could be viewed as an exaggerated sound of a page being turned that interestingly counteracts the immediacy of the immediate, realistic sounds. Real time effects such as fog are fully animated with certain panels. One frame depicts a fire flickering constantly with a statically drawn torch, while another shows a soldier being knocked off his steed by a Gryphon, which is animated to show his body and shield flying outside of the panel’s border. Overall, this interactive, digital comic is a solid step forward for implementing interactivity without giving the player true agency. The story is linear and has a fixed outcome, but the non-trivial effort the explicit interactivity required to proceed makes that feel untrue. Nevertheless, this digital comic does not depict fuller uses of ergodicity. In Aerseth’s words, this type of interactivity should cause the user to “constantly [be] reminded of inaccessible strategies and paths not taken, voices not heard” (3). *The Witcher 2 Interactive Comic Book* is content staying on the closed, explicit side of interactivity.

On the other hand, *Murat: Non Stop Bar* addresses the absence of ergodicity. Produced by the Motiv studio from the Czech Republic, this web comic is more than initially meets the eye. It is interestingly labeled as both an “interactive movie” and “interactive comics” on its official website (Motiv). The first page greets the user to a panel of an elderly woman and young man standing in the doorway of a bar. Four smaller frames are laid out to the right that depict the surroundings of the establishment from multiple angles, which includes close-ups of characters. The user can immediately skip to the next page, but by moving the mouse and clicking the four panels on the right, he or she would discover this web comic contains hidden secrets. This kind of exploratory

interaction is similar to a digital comic called *Nawlz* that Kirchoff analyzes. It contains “non-trivial interaction in that a) readers can technically choose how to interact with the text (scrolling or pointing-and-clicking) and b) that the pointing-and-clicking requires an additional element to it: searching for the un-lockable content” (Kirchoff). For example, the first page of *Non Stop Bar* has the ambience of a bar with gambling machine noises and the creaking of moving chairs in the background. Another sound is the hum of a ceiling fan, but users can actually stop it by clicking on the fan in one of the panels, which causes it to stop rotating. Simply moving the mouse around causes the eyes of the bar’s owner in the top-right panel (which are portrayed close up) to move wherever the mouse goes. Not only does this eye movement react to this action, but it is also meant to simulate how he is skimming through a magazine in the next panel underneath, and by clicking on it, users can watch him flip through the magazine as well. The third panel shows the woman portrayed up close as well, and clicking on her activates a short, ticking sound. It sounds like a spinning cylinder for a revolver, which foreshadows the story’s trajectory.

The next page has a sequence of nine panels in rows of three, but clicking on each one constructs the complete ambience of the room with yawning, sipping, fingers tapping, and more (see figs. 13 and 14). Another page involves putting panels in the right order like a puzzle. Completing the full image reveals a brewing machine that is activated with a screen prompt, which sends a beer bottle through each of the panels up to the bar table near the top of the page. With specific sections of the machine separated by panels that must be individually operated with clicks, the user better understands how the machine works from multiple angles. The next page depicts the elderly woman failing to



Figure 13. The reader would miss a wealth of animated information about the bar's ambience by not clicking on the panels. (Motiv)

win at a gambling machine, which is followed by another showing her walking toward the bar owner from three different perspectives. The first panel emphasizes her angry expression, and clicking on it reveals a panel

underneath that shows her

gambling machine with zeroes projected on its display. This was seen on the page where she was gambling, which gives context to the motives fueling her frustration; it is almost like a convenient way for users to re-read the comic without needing to go backward. The second panel depicts her hand reaching into her jacket, and if the user clicks on it, she pulls out a revolver accompanied by the sound of the hammer being pulled back. The next page slowly unveils the woman holding up the bar owner. At one point, the user is prompted to turn a safe lock until he or she hears the telltale click. The comic then concludes with a page of the woman and her accomplice walking down a rainy street.



Figure 14. Clicking on the heads of characters throughout the comic reveals their thoughts and emotions through visually metaphoric thought bubbles. (Motiv)

Their temporal, animated movement is portrayed across sequentially arranged panels that show different perspectives of the street to give the reader a sense of the environment and continuity between panels.

The pages of *Murat: Non Stop Bar* tell us that it is strictly designed for digital. Its vague, visual storytelling without any word balloons would fall apart and have to be reworked as a print version. Portions of ergodic activity are also evident in innovative ways. The page where the viewer has to construct the brewing machine is not only depicting the functions of it through the carefully arranged panels, but they are also purposed for game design since they have to be arranged correctly with puzzle solving. Another page pushes the player to understand the arrangement of panels with the woman playing at a gambling machine. One frame contains a bag of coins, another has a coin slot, and another has a “Start Risk” button. Among other panels that show various parts of the machine, a close up of the woman with an intense expression, and an oblique angle from a few feet away of the woman sitting at the machine, the viewer has to discern which panels are relevant to click on in a specific order to get the woman to gamble until she runs out of coins. There is not only an environmentally spatial relationship between the panels, but also a functional one. This is a rare example of game design melding with spatial storytelling. It completely subverts the reader’s mindset to read panels from left to right because panels are temporally and sequentially interpreted by the reader in terms of what they do, not where they are placed. It attests to how deeply this digital comic delves into ergodicity without becoming a comic videogame.

One of the most compelling interactive, digital comics is *Metal Gear Solid: Peace Walker* for the PlayStation Portable. It is a videogame, animated film, and comic all at

once, but what could this mean? Sutton-Smith writes that videogames involve “visual scanning” with perceptual scanning of the screen, “auditory discriminations” by “listening for game events and signals,” “motor responses” with required “physical actions,” “concentration,” and “perceptual patterns of learning” how to interact with game structures (qtd. in Salen and Zimmerman 23.2). In relation to *Peace Walker*, it attempts to be a photorealistic videogame set in a gritty world of political drama and war economies, and the goals it sets for players fit Sutton-Smith’s requirements. The title also has abnormally long cutscenes that are presented in the same style and manner as the *Metal Gear Solid: Digital Graphic Novel*, and interestingly enough, these cutscenes meet his requirements as well in a different sense. They are replete with small moments of explicit and ergodic interactivity. Most of the panels progress on their own like an animated film, but their overall construction and presentation reach creative levels that exceed the hypermediacy of *Digital Graphic Novel*. I will specifically be analyzing these cutscenes as an interactive, digital comic within the *Peace Walker* videogame.

The cutscenes are drawn in an erratic, savage style that violently contrasts the photorealistic graphics during gameplay, but in terms of thematic relevance, the art style captures the story’s mature themes and troubled characters more appropriately. Word bubbles are used even though there is voice acting. Onomatopoeia also accompanies sound effects, and the words are even colored and animated to visually relate to the type of action or movement they are associated with (see fig. 15). Shaking, blue, glowing letters appear when the player’s character, Big Boss, strikes an enemy with an electric stun rod. This illustration not only broadens the possibilities of visually representing sound, but also the shape of word bubbles and the words they contain. *Peace Walker* may

not experiment with this idea, but what if a digital comic showed icicles forming under a word balloon to represent a cold, curt comment? What if the words were animated to slowly turn



Figure 15. The square panel falls down in this frame, mimicking the character slamming his cup on a table. The animated, swaying coffee and bold red “BANG!” emphasize this. (Kojima “Peace Walker”)

blue and morph into a jagged font as well? If interactivity is involved, the user could influence how a line is delivered and visually represented, affecting another character’s response in turn. McCloud writes, “Over the years, comics creators have struggled with dozens of variations in their desperate attempts to depict sound in a strictly visual medium” (McCloud “Understanding” 134). With the digital space, this is no longer a limitation to be scrapped but *expanded* upon to advance how the comic form can utilize its design language to the fullest.

The majority of the cutscenes’ art is drawn to be static, but with digital affordances, the designers were able to isolate any portion of characters’ bodies so they could partially come to life. Eyes are even slightly stretched or collapsed on occasion to convey subtle facial expressions with close up panels. This approach eliminates the need for many “moment-to-moment transitions” between panels, whereas “action-to-action” is the most common and almost always maintained (McCloud “Understanding” 70-72). Just like *Digital Graphic Novel* and *The Witcher 2* comic, there are moving and overlaying panels that communicate how environments and characters fit together, but these panels’



Figure 16. Even though Kazuhira (center) has handed Paz (left) a coffee, the moment he does this is still frozen in time, even though the viewer assumes she is sipping it as he keeps talking. This is another example of Manovich's spatial montages. (Kojima "Peace Walker")

relationships are more expertly crafted than those prior digital comics. For example, one cutscene shows Big Boss' right-hand man, Kazuhira Miller, toss him a jacket. The reader's eye naturally follows the

jacket's trajectory as it moves to the left, but instead of smoothly panning to where Big Boss is standing out of view, a black line divides the panel in two once the jacket flies pass the left border. The new panel of Big Boss slides in from the left as he catches the jacket, pushing Kazuhira out of the frame as the perspective shifts toward Big Boss. With the audio running continuously in real time, the user aurally interprets every cutscene in a temporal manner, but the artwork bifurcates this interpretation. The sound may be temporal, but the user has to fill in the visual gaps between panels with spatial interpretation. This is consistent across the cutscenes, such as when three characters are having a conversation. While the voice acting takes place in real time, the panels will only animate and brighten the panel in which the current character is speaking, thereby figuratively freezing the other characters in time (see fig. 16). The shading of frozen panels acts as a strange type of gutter, prompting the viewer to fill in what is going on with these panels while one is unfrozen to and not shaded to highlight who is speaking.

Instead of only zooming into panels, *Peace Walker* opts to use the border itself as a gateway into revealing larger environments. One example is a moving panel surrounded

by a parchment backdrop that follows a bird in a Costa Rican forest. The panel follows the bird for a few seconds, but then enlarges and takes up the whole screen to reveal the whole perspective of the forest canopy. Icons such as motion lines, exclamation points, and other comic symbols also portray emotion and quick movements, which are ironically redundant since digital comics are no longer bound to strictly being static and visual. It speaks for the devotion Kojima Productions has to preserving the art form of comics while pushing it as far as possible in the digital realm. Instead of seeing digital comics as unnecessarily hanging onto the design conventions that define its traditional limitations, perhaps they should be viewed as a way to creatively enhance or highlight particular emotions or actions that normal multimedia cannot do as powerfully alone. In other words, instead of feeling freed to fully animate a character running on a street, what role could comic design still contribute to this scene with motion lines, word bubbles, and borders? The limitations are no longer limitations but amplifiers.

The cutscenes can trick users into reading panels not only horizontally and vertically, but also three-dimensionally with depth. A jarring example of this is when the videogame's antagonist is depicted grabbing a hostage, Paz, from another panel, which figuratively pulls the reader's eyes inward as the panel comes toward the viewer and fades out,

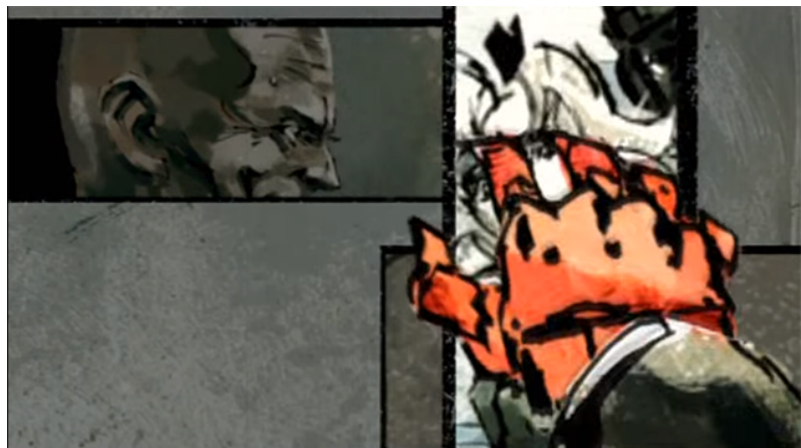


Figure 17. The viewer is uncomfortably thrust into the first-person view of the antagonist as he reaches for Paz in another panel, which is one of many hypermediated moments in *Peace Walker* calling attention to the comic form. (Kojima “Peace Walker”)

revealing the next panel of the antagonist holding Paz (see fig. 17). Most digital comics remain on the same plane as panels are just laid over others, but this instance implies that another plane of panels is set parallel to the other, which is a profound realization of the infinite canvas concept. It is just another cutscene among many others that directly challenge how creators and readers can imagine and experience sequential art. The host of techniques and effects that combine temporal *and* spatial storytelling in *Peace Walker* are made with little compromise, and the same can be said for how interactivity is applied. However, that is not to say that *Peace Walker* implements interactivity perfectly as an interactive, digital comic. There are a couple of times where the line is dangerously crossed with cutscenes becoming more like comic videogames. One such sequence is when the player assumes a first-person perspective of Big Boss. He is trying to launch a rocket missile at an autonomous drone, which is kidnapping a friend of his named Amanda. The player must guide Big Boss' aim to shoot the drone and press "R1" to fire. The user is suddenly enacting full agency over Big Boss, and if he or she misses shooting the correct drone, the action impacts the following cutscene. Instead of Big Boss shooting the drone down, Amanda frees herself with a spare pistol. While this choice does not change the trajectory of the narrative since Amanda falls all the same, it is the only instance of a "branching" story path in *Peace Walker*. Since this sequence becomes highly reminiscent to normal gameplay where the player uses weapons to take down targets, it could be argued that the scene briefly sacrifices the comic art form to emphasize agency and interactivity and become a comic videogame. Whether or not this illusion is acceptable to break on occasion is up for debate as long as it does not permeate

or overpower the entire digital comic, but the remaining examples do not elicit this concern.

The most powerful example of game and comic design intermingling in *Peace Walker* is when Big Boss confronts a CIA grunt in hand-to-hand combat. As they approach each other in a panel that takes up the whole screen, the player presses “R1” and a new panel appears in the middle with the combatants’ forearms interlocked in a struggle. The panel shakes with an onomatopoetic word erratically moving up and down to symbolize the strain and grunting of both combatants. During this sequence, the “Triangle” button must be pressed rapidly or the player has to repeat the sequence ad infinitum. I would not consider this to be a fail state since this is conflict without consequences, unless one considers needing to repeat the sequence a fail state. Either way, what makes this particular moment unique is how the panel moves in response to how quickly the button is pressed. If it is not pressed fast enough, it will move toward the left near Big Boss, who is depicted on the right side of faded panel underneath. On the other hand, if the player presses the button rapidly, the panel moves toward the left to



Figure 18. Little waves emanate from the illustration of the button as it is pressed, providing visual feedback to the user's actions. (Kojima “Peace Walker”)

show that Big Boss is overpowering the grunt (see fig. 18). These panels could have been represented side by side in a static, print comic. However, the extra animation, sound, and interactivity invest the user

much more in this tense moment. Not only does it feel like he or she *is* Big Boss, but he or she is also under the impression of shaping the design of the comic itself. The panel's movement is linked to the button pressing, thereby establishing an emotional and immersive rapport between comic iconography and a game mechanic. In addition, the button is visually represented in the lower-right corner, which pulsates to visually communicate to the player how quickly it needs to be pressed. Since the player connects the moving panel with the button in this fashion, it forms contextual meaning alongside comic symbols and parts that could have untold influence in how other mechanics, buttons, and gestures by the player could blend with comic design as well.

With these button-pressing actions, Sutton-Smith's five elements are all present with the viewer needing to watch for buttons appearing in any corner (visual scanning), listen for a shrill sound that plays when these prompts appear (auditory discriminations), act with intent on the visual prompt (motor responses and concentration), and be wary of how the "structures" of these cutscenes work (perceptual patterns of learning). *Peace Walker* cutscenes technically turn into a videogame at various points, but not to the extent where the user is constantly in control or truly guiding the actions of characters. Examples of lighter interactivity are present that the player does not even need to engage with to proceed. In some instances, the user can push a button when a character mentions someone or something new that will bring up a panel providing visual context and/or clarification. Another example comes from the player being able to move around and zoom in to reveal hidden details in a panel, even while characters are still speaking with word bubbles popping up around the screen. After Big Boss' friend plummets to the ground upon destroying the drone that captured her, she talks to him about her role in the



Figure 19. Interactivity like this puts the viewer in a constant awareness throughout the cutscenes because he or she never knows when moments like these will pop up. (Kojima “Peace Walker”)

story while lying on the ground. Instead of watching the conversation unfold passively, the user can zoom in on her body, which peels away her clothing to reveal an x-ray view of her skeletal

structure (see figs. 19 and 20). In doing this, the user realizes that her right femur and left ankle are broken. Much like the three-dimensional depth in the panel where the antagonist grabs his hostage, this scene encourages the user to sequentially read *inward* with this layered presentation of panels. It is a perfect blend of ergodicity and explicit interactivity without removing comic book imagery in the process. In fact, it prompts the viewer to look deeper to not only gain extra information, but also a pseudo-involvement with the story itself, since the viewer is made to feel as though they are identifying the friend’s wounds for Big Boss so he can understand her wounds.

What if zooming could also reveal the thought bubbles of characters?

What if new perspectives or information is provided

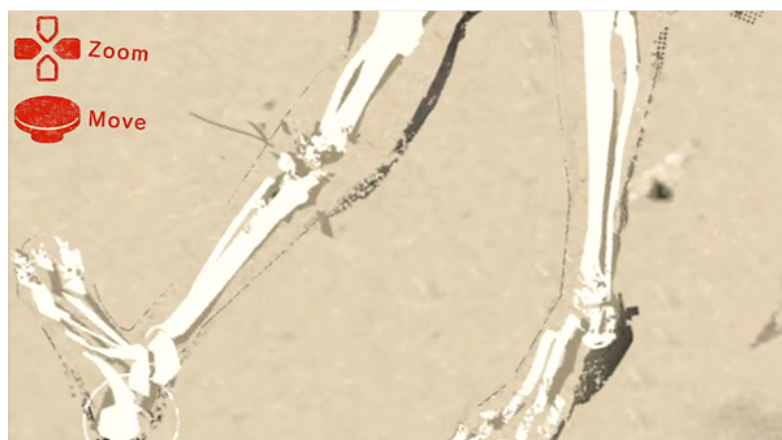


Figure 20. Zooming in reveals this character's injuries, providing additional context to her condition if the user chooses to engage in this interactive prompt or not. (Kojima “Peace Walker”)

in hidden panels that are only shown by inspecting certain parts of pages? McCloud may be prone to talk about panels represented on cubes or like a descending staircase with the infinite canvas (McCloud “Reinventing” 223), but the possibilities with this one example from *Peace Walker* adds complexity to spatial storytelling where sequential art can be represented in *layers*. In other words, the possibilities are not only expanded for the X and Y plane with digital comics, but the Z plane, too.

Laurie N. Taylor writes, “Further work is certainly needed on the connections between comics and video games in terms of audience, narrative plots, narrative structures, imagery, and physical structuring” (23), and all of the aforementioned digital comics assist in this endeavor to form a more complete picture of this medium. These analyses have helped us pinpoint what interactive, digital comics can uniquely accomplish. In the process, I have revealed my own assumptions and hopes for every mentioned concept and idea applied to digital comics, but this study would hardly be complete without gauging how they are socially perceived through the lens of genre and qualitative interviews. With the next chapter, I will determine how interactive, digital comics (and digital comics as a whole) are shaped by genre and if they are seen as a natural extension or aberration of the comic medium by society.

Chapter 4 – Genre and Audience Study – Reading Into The Genre and Social Perception of Interactive, Digital Comics

Recognizing and Setting Apart Digital Comics as a Genre

I have put together a more precise separation of digital comics to close in on what makes interactive, digital comics unique and worthy of attention as a hybridized genre. While all of my examples provide a more accurate view of different digital comics, it is hardly meant to be final or specific. In regard to videogames, Egenfeldt-Nielsen and et al. argue that “the large number of genre systems exists because there is no objective way to measure the differences between two things. . . . They are analytical constructs imposed on a group of objects in order to discuss the complexity of their individual differences in a meaningful way” (46). This is why genre is complex and problematic if its influence and wide-reaching effects are not understood, but what is genre in the first place? Film theorist and University of Exeter professor Stephen Neale writes that genre literally means “type” or “kind” as a French word (Neale “Genre” 7). A former teacher in the Department of Theatre, Film and Television Studies at Aberystwyth University, Dr. Daniel Chandler summarizes genres as “particular conventions of content (such as themes or settings) and/or form (including structure and style) which are shared by the texts which are regarded as belonging to them” (2). *Metal Gear Solid: Digital Graphic Novel* and *Overwatch Issue #7: Legacy* share many similarities to form the general genre of “digital comics,” but their multimedia elements drastically differ in purpose and effect as I have previously made clear. Digitality has revealed new affordances and levels of interactivity to be accounted for apart from the medium’s traditional, physical mode.

So, the first step to understanding digital comics as a genre is to see how they are united as comics. Considering that comics are traditionally sorted by themes, publishers, intended audience, and more, it is appropriate to “separate form from content” if we are to adequately divide digital comics apart from these superficial classifications (McCloud “Understanding” 5). As I wrote with my definition, the comic form and sequential art should largely command the composition of digital comics because they are founded on recognition as comics first and foremost. Chandler writes, “Genres offer an important way of framing texts which assists comprehension. Genre knowledge orientates competent readers of the genre towards appropriate attitudes, assumptions and expectations about a text which are useful in making sense of it” (8). Encouraging this comprehension is accomplished through “verisimilitude,” which means “‘probable’, ‘plausible’ or ‘likely’”. In addition, it entails notions of propriety, of what is appropriate and *therefore* probable (or probable and therefore appropriate)” (Neale “Genre” 28). As digital comics evolve, many are relying on comprehension and recognition too much with retro remediation. The full intent of verisimilitude is about “variance and difference” alongside comprehension (Neale “Questions” 173), so pretending that genre is static ignores the storied history of genres being process-oriented. Neale writes, “[T]he elements and conventions of a genre are always in play rather than being simply replayed; and any generic corpus is always being expanded” with film genres being a wonderful example because they disappear, arise, and mix together in myriad ways (Neale “Questions” 165-166).

Genres are not neatly organized because they cross over and mix together, so even though people easily recognize genres, exactly defining them is next to impossible

(Chandler 2). While many would consider comic books to be the purest form of comics, the art form's evolutionary history has always been hybridized. It is subject to "the flexible relationship of the word/image hybrid" as a peculiar amalgamation of literature and art that does not fit into either of those categories because "[t]he visual nature of the form can, after all, range from a crude collection of sketches to scenes of startling realism, and the narrative and textual possibilities are equally varied" (Wright 12-13). Digital comics are the next step in this evolution, and multimedia and interactivity should define them as a genre in order to balance repetition and difference with verisimilitude.

Genre's Influence Over and Social Construction By Audiences

While genres from a macro level should persist and be maintained, they are not timeless or permanent at a micro level since they are socially constructed and always changing. Gunther Kress writes, "Genre is a category that orients attention to the social world . . . shaped by social structures and habituated practices of greater or lesser stability or persistence" because we internalize the social construction of texts (i.e. genres), which then represents forms of generic text (87-88). This observation means that genre is "a social category" that's crafted and concretized in mutual conversation, which can help discern what the society is like that made up the given genre (100). When technology comes into the mix, it can completely alter the social context in which people experience, define, and separate similar texts because technology shapes existing genres of texts according to "modes" (112). Ignoring how the unification of mode and form drastically changes a genre is like taking a physical and digital comic and ignoring the blatant differences between their modes. Kress writes:

Each of the two texts overall is incomplete without both written and visual parts; each mode, writing and image, does distinctly different and specific things. The specificity is the same at one level: the affordance of the logic of time governs writing, and the affordance of the logic of space governs the image. Within that, there is the possibility of generic variation. (115)

This “generic variation” is possible because of digital affordances working in unison with the form of comics, which allows us to see how the logics of space and time coalesce to make digital comics. The unique consequences of these affordances have largely gone unnoticed, but once society realizes how much digital comics can tip the scales toward difference rather than repetition, people will know that genres exert a force over comics. This realization particularly alters how creators (and consumers) involved in the comics industry will define and perceive digital comics, which is an effect created by “genre functions.” Dr. Anis Bawarshi, a professor in the Department of English at the University of Washington, writes that genre functions “position and condition discursive behavior in such a way as to preclude a sense of beginnings as unprecedented, unmediated, unmarked scenes of origin. . . . Writers invent within genres and are themselves invented by genres” (7). This behavior is seen in the production of traditional, digital comics and how those who operate in the comics industry are obligated or subconsciously influenced to ignore multimedia or interactivity. “Genres are discursive sites that coordinate the acquisition and production of motives by maintaining specific relations between scene, act, agent, agency, and purpose” (17).

The impact of genres shows how working within conventions is a problematic limitation whether it is intentionally recognized or not by comic creators. They should

break free from these limitations because genres are meant for hybridization via experimentation, and the same should occur with interactive, digital comics. “Genres shape us as we give shape to them, which is why they constitute our activities and regulate how and why we perform them” (Bawarshi 25). Much like how no medium can escape remediation, it is impossible to operate outside of genres since they demand semblance and conformation to the mediums that society constructs. We need to be aware of this and realize how we can subvert expectations without upsetting them because “[i]nvention takes place within genres, and can be a site of conformity and/or resistance” (46). Only then can the spirits of verisimilitude and genres as process-oriented be harnessed to create a smoother pathway toward creating interactive, digital comics.

How Audiences Create Genre

These theoretical considerations of genre lay the groundwork for my research in the field with digital comic creators, game design students, and comic shop owners. These interviewees provide a varied cultural perception of the involved mediums and concepts discussed thus far that not only complement and contradict my perceptions, but also challenge digital comics’ future and design as a genre. Every individual perspective grants insight into the “real” social genre of digital comics, rather than what I perceive and hope for it to be. To predicate this socially driven view of genre, I would like to borrow from an accomplished author and education professor at the University of California: Dr. Charles Bazerman. He believes that genres are determined by social facts (“those things people believe to be true, and therefore bear on how they define a situation”) and speech acts (vocalizing and putting social facts to action) (313). These facts and acts make up genres of how we communicate with each other and interact with

“genre sets” within “genre systems,” which create an “[i]ntertextuality [that] often seeks to create a shared understanding of what people have said before and what the current situation is” (313). How people talk about and interact with comics and videogames influences how interactive, digital comics are viewed. While he writes about genres of social and cultural behavior and my approach involves genres of form and interactivity, we are united in believing that genres as a whole are meant to be flexible and varied. If we do not accept this, it “[limits] us to understanding those aspects of genre we are already aware of . . . ignores how people may see each text in different ways . . . [and] obscures how [genre as a collection of features is] flexible in any instance or even how the general understanding of the genre can change over time” (322-323). Bawarshi echoes this sentiment with “speech genres,” which “organize and generate the very communicative conditions within which speech subjects – both speakers and addressees – interact, in the same way that literary genres constitute the literary contexts within which literary subjects—writers, readers, and characters—interact” (34). Bazerman tellingly insinuates that being aware of this underlying system of genre promotes others to go against the grain of established views of any particular genre and allow for new ones to rise up (311). Creators and scholars of comics should understand how important their own and the public’s perceptions of digital comics are for digital comics as a genre.

It is only fitting to apply reader-response theory to the interpretation of my data since I have established a view of genre that emphasizes the individual’s role in actively participating in its construction. My interviewees come from different backgrounds, specialties, and impressions about new media, comics, videogames, and the like, so I must take their individual expressions and weigh them all into equal consideration. I do

not believe there is necessarily a “right” reading of a text, and Dr. Louise M. Rosenblatt would have agreed. She is an author and professor in literary studies, writing, “The matrix of past experience and present preoccupations that the reader brings to the reading makes possible not only a recognition of shapes of letters and words but also their linkage with sounds, which are further linked to what these sounds point to as verbal symbols” (37). These recognitions in a general sense are unique for each person, which validates the varied, contrasting responses I have received from my interviews. It is also a relevant theory to apply because it shares a surprising relationship with the ecological theory of perception outlined by Gibson. After all, her idea of transactional theory – which is similar to reader-response theory – is tied to it:

The transactional point of view has been systematically developed by a group of psychologists mainly through experiments in perception. . . . The transaction involving a reader and a printed text thus can be viewed as an event occurring at a particular time in a particular environment at a particular moment in the life history of the reader. (Rosenblatt 44-45)

I can frame and contrast how my participants understand interactivity, videogames, comics, and more by coding and connecting my data through this lens. In doing so, a glimpse into the current reality – consistencies and inconsistencies alike – of interactive, digital comics’ social perception is gained, indicating their future trajectory as a medium and genre.

The Social Perceptions of Interactive, Digital Comics

My interviewees consist of four game design students (Clark, Bruce, Barry, and Hal) and three comic storeowners (Arthur, Oliver, and John). The former were shown

Metal Gear Solid: Peace Walker, *The Witcher 2 Interactive Comic Book*, and *Murat: Non Stop*, whereas the latter were shown the same with the exception of *Murat*, which was replaced with *Overwatch Issue #7: Legacy* due to time constraints.

What I discovered first is that traditional, digital comics may be fairly common knowledge, but anything with multimedia and interactivity was a novelty to everyone, especially interactive, digital comics. Clark had seen the multimedia, digital comics in the *Metal Gear Solid* series, but Bruce and John saw some as promotional experiments with ads. Bruce did not imagine they could be as “extensive” as what he experienced. John had seen plenty of motion comics with multimedia, but not interactivity. He said, “This sort of reminds me of like a hybrid mix of games like *Uncharted* where they’re real cinematic and still have you like, you know, pressing buttons so you they can keep you engaged with the game.” However, every participant agreed that they had never seen digital comics like the ones I showed them nor thought they would be so interactive. Four of them assumed they would be digital versions of print comics, which Barry called “computerized” comics. Ted thought they were “regular comic books” that are just on the computer. Oliver had never “watched” digital comics similar to what he witnessed and did not expect there to be deviation from the norm. While some recognized there could be digital comics with multimedia and interactivity, the general unawareness of *interactive*, digital comics was confirmed in these observations.

Since my interviewees expected digital comics to conform to the design standards of traditional, physical comics, it revealed many of their presumptions of what constitutes a comic. To paraphrase Barry, he said a comic is pictures in blocks that tell a short story with unique symbols through “the way it’s set up.” Hal considered comics as “artwork

with a story to it in a collage form,” associating superheroes and unique art styles to comics as well. John opted for a more scholarly view by calling comics “sequential art . . . [there has to be] a consistency in those panels too, a consistency of, like, the backgrounds, the setting, that sort of thing. It’s supposed to visually tell you a story as opposed to just simply being an illustration.” Oliver was not as sure, seeing comics as a long-form story told in increments (i.e. issues) that are “drawn” with word bubbles. Clark said comics are “just a way of telling a story using photos in a particular art style . . . or [with] exaggerated photos,” and he tellingly slipped in his terminology when trying to find out how to classify comics as a genre based on materiality or themes. “For me a comic book is . . . or a digital novel, well . . . graphic novel, I’m sorry. I mean there is a distinct difference between the two. One might be considered more mature.” Bruce also draws an “academic” distinction between comic books and graphic novels based on “length,” revealing an underlying confusion for what officially constitutes comics in terms of parts.

Some of my interviewees considered materiality essential to comics’ definition. Bruce said, “Comic books,” in particular, “are a purely physical medium. Generally, you have the kind that are almost purely illustration with words thrown in as opposed to a picture book which is mainly words with some pictures thrown in here and there.” He placed an emphasis on the implementation of words and materiality, but did not rule out digital comics entirely since they “do have that rigid structure with how the story is going to progress.” Arthur saw “a comic book as a collection of stories put together in a small book format,” and it is interesting how much historicity and tangibility he brought up to call attention to materiality. He mentioned early on that “a real comic book” is one you

can hold “in your hand that you can read at your leisure.” He also commented off-hand, “I know you might find that odd: the smell of the paper, the feel of the paper, the texture of the paper, [but] you just can’t get that on a digital device.” I asked him if tangibility is essential to comics because of this materiality and he believed this was true. “Because if you don’t have something in your hand, how can you put a price on it?” It would seem that he puts an interesting judgment on digital comics based on monetary value in contrast to physical comics, rather than by the experience the former can provide. In light of all their remarks, they all agreed that comics always tell a story. Sequentiality is also inferred or directly stated across the board with comics being a collage, sequence, or collection of photos, pictures, or illustrations. Most of them emphasized the role of visuals rather than words to communicate a story, whereas Arthur and Bruce particularly pointed out the physicality of comics with them being books.

Among the game design students, three of them agreed *Murat* was the most interesting sample they observed due to its interactivity. Clark and Bruce specifically highlighted the moment where they were thrust into using the mouse to turn the safe lock, whereas Hal mentioned the general ergodic nature of *Murat*. “It was just kind of fun doing all these simple things as a game in itself but a comic book,” he said. “I was trying to find everything.” Barry chose *The Witcher 2* because he enjoyed the immersion of swiping panels in various directions since it made him feel “more in-tune with the story.” Arthur and John respectively chose *The Witcher 2* and *Peace Walker* mainly for their art styles, whereas Oliver expressed distaste for all of the samples due to their interactivity and multimedia. He also did not like the art styles of the two samples that Arthur and John specifically enjoyed. There are discrepancies in what all of my interviewees

prioritized with the game design students focusing on interaction and the comic storeowners pointing out the art styles.

Since the game design students prioritized interactivity, I wanted to know how they would define videogames and what kind of interactivity separates them from other media. Barry and Hal generally called them goal-driven experiences with systems of interactivity, which echoes how Egenfeldt-Nielsen and et al. define videogames. On the other hand, Bruce and Clark said videogames are interactive experiences with a win/loss state by emphasizing outcomes and conflict. However, the thread combining them all is the type of videogame interactivity that I defined earlier on: explicit, ergodic interactivity. Clark said, “There has to be a way to control what you’re doing in a game;” Barry said, “you choose what you want to do;” Daniel said, “Interacting [is] more than the simple action of progressing to the next thing, . . . [like] turning a page, essentially.” These notions of interactivity involve direct influence and involvement with videogames, so I challenged the students about what separates comics from videogames in terms of interactivity. All of them agreed that this involves different amounts of freedom. Barry highlighted how branching storylines and being able to influence them is when something becomes a videogame. Hal considered being in control or “directing” the path of an experience as the breaking point. Clark and Bruce respectively point out the same principle with videogames granting “complete control” (versus partial control) and “player agency.”

These distinctions of interactivity became further complicated when I posed the issue of whether these interactive, digital comics vary in terms of interactivity. Hal, Barry, Arthur, and Oliver agreed that *Peace Walker* was unique in that it was more like a

movie than a comic. Hal humorously referred to it as a “comic book version of *Netflix*.” The others mentioned how *Peace Walker* is like a comic in style rather than form, which lacks the “comic book feel” of the other samples, according to Barry. However, whereas everyone was positive or neutral about what made *Peace Walker* different, Oliver did not like it. “When they start adding sound effects it starts turning into a show,” he said. “It’s not the same. Somebody gets on Kindle and wants to read a book. There’s [sic] no sound effects, there’s [sic] no nothing. You just turn the page and it’s just like the book. Do you want to watch a movie or do you want to read a book?” It’s a view that Arthur echoes in an objective sense when he told me that the simulation of turning pages should be present for a digital comic to truly be a comic book since “human interaction” is important. He said, “I would consider a digital comic book one that’s interactive where you can swipe left, swipe right to flip the pages or what they perceive as pages. But one that just plays where you might have to press just one or two buttons, I consider that of a movie or some kind of vignette.” His qualification about interactivity not going beyond flipping pages is similar to Oliver’s beliefs, so it is safe to say that these two and the rest of my interviewees had different ideas of what interactivity entails. They made clear distinctions between tactile interaction with traditional comics and agential interaction with videogame-like interaction, but often confused the two types together by not using specific terminology. Nevertheless, they saw different levels of agential and tactile interactivity and different extremes of multimedia with the interactive, digital comics they viewed with *Peace Walker* and *The Witcher 2*.

Disregarding these distinctions, my interviewees had varied reasoning for what generally makes up interactive, digital comics and what separates them from being too

much like comics or videogames. Bruce claimed they require a small amount of skill/participation that replaces the interaction of “just turning a page but made more difficult.” Clark saw them as containing win/lose states since the greater interactivity presents the reader from advancing forward if they get something wrong or refuse to participate. Barry considered them to be “less focus prone [by easing] the way that you approach enjoying the story. In comparison to videogames, they do have more interactive components to them and they don't – they do tell stories for most of the time.” In other words, Barry meant that stories are not optional with any form of comics, unlike with videogames. Hal implied that interactive, digital comics also do not require the reader to discern the pattern of panels as clearly because their usual spatial relationship is altered to remove possible ambiguity. He thought the additional elements helped him focus more on enjoying the art and story in an engaging manner instead of “lulling off and just reading the pages.” Clark said that interactive, digital comics “take what's in a comic book and just add to it. Make it more extravagant, make it more fun, make it more interesting, make it more immersive.” Arthur simply believed that these comics can be whatever people want them to be despite his prior comments, and while Oliver thinks any multimedia or interactivity is off-limits, he admits that interactive, digital comics can be “a mix.” I asked him to elaborate on this. He replied, “Yeah, it's like its own separate thing even though it's got what you would think of” in a regular comic. Despite his distaste for interactive, digital comics, he seems to think there is a place for them as their own genre that he could not quite vocalize.

On the other hand, John does not seek to draw a line as long as interactive, digital comics are in the spirit of sequential art. “They still fit within those parameters, even

though there's like some movement and everything," he said. "It takes away from I guess the implied movement to their actually being movement, but it's still the same principle." Using *Peace Walker* as an example, he said, "I think that that still mimics sequential artwork as opposed to it being like a videogame that's actual animations and everything." In fact, he mentioned that it would be hard to consider the samples he viewed to not be comics. "It's the same principle as, 'Is a book on tape not still a book?' It's a different, you know, you're not viewing words on the page and interpreting it in your mind. You're hearing someone else's reading of it . . . but it's still a book." I noticed that Oliver made the same exact point with his Kindle example, but in the context of proving that having someone narrate a book would *not* make it a book anymore. Shockingly enough, John and Oliver have the same approach with opposite conclusions, which demonstrates how some immediately equate comics with comic *books* to put more weight on their materiality, whereas others are lenient with elements like multimedia and interactivity as long as the form remains intact.

After they had told me their thoughts on what interactive, digital comics are, I was surprised by how they saw their potential evolution beyond entertainment. Barry and Bruce said they could be used as a bridge for accessibility for those with disabilities to experience the ergodic interactivity of videogames in a lighter form through comics. Bruce additionally pointed out how interactive, digital comics could extend beyond entertainment for "teaching or an instructional thing" with manuals or other educational purposes. I cannot help but consider how interactive, digital comics could be applied to a manual about how to operate a piece of machinery or visualize an abstract concept or math theory through sequential art because of Bruce. As for Hal, he thought that more

branching storylines and overall “interaction” should be added, and Clark argued that multimedia such as sound effects, voice acting, and animated motion are pivotal to “immerse” the reader. Oliver said if they are interactive, they might as well become videogames and go all the way rather than try to straddle a line. “It’s like it doesn’t matter which way it happens, it’s still going to end up the same way. Unlike a videogame you know, you sort of . . . you can fail.” It was a surprise to hear this offhand comment that revealed part of his definition of videogames, which uses win and fail states to separate them from other mediums like comics. Arthur told me that digital comics, as a whole, are more of a means to an end for preserving older comics. Interactive, digital comics were more of a trivial side point for him that could be “more fun” and “exciting” with additional interaction, but he was thinking more about how the mode could be used to benefit traditional comics. Now, these overall reactions from my interviewees leave interactive, digital comics in a spot where more multimedia and interactivity are desired, which includes unexpected yet wholesome hopes that they will increase accessibility to videogames through comics and be used for more than entertainment.

When I take all of the game design students’ answers into consideration, they were more optimistic about interactive, digital comics and focused more on their multimedia and interactive elements. They believed that these comics do have a place in the comics industry and largely distinguished them from videogames by having partial agency and control. Bruce attempted to pinpoint what he meant by this when talking about *Murat*, and I believe his response captures the game design students’ view on interactive, digital comics. “So even though it was very much that on rails story, I was able to feel a little more connected to the characters and the story even for a comic book

because I was taking those actions. It wasn't necessarily the characters, it was me as those characters." His line of distinction with videogames is that they allow players to influence "[n]ot only the story path, but also the play path," whereas interactive, digital comics should provide the illusion of the latter.

The people within the comic shop industry are not as easy to group. Arthur and Oliver expressed indifference, even distaste, for interactive, digital comics since they remove the tactile and collectable aspects of comic *books*. Interactive, digital comics are more of an offshoot of traditional comics than a new medium to explore for these two, and both considered additional multimedia and/or interactivity as superfluous or undesired. Arthur said, "Digital comic books is a popular . . . compendium to the future of books," and Oliver told me, "You're supposed to be reading along with what's going on, not be the one that pulled the trigger. You know, that's like a different thing." However, John was the only one who expressed interest in interactive, digital comics to change how readers take in and interpret sequential art, even though he expressed similar views about them being used for the benefit of print comics. All of them (along with Barry) also stressed that print will always be the primary mode for comics first and foremost, but their visions of digital comics' success differed. Arthur ignored their potential as a form and saw them being primarily good for the preservation and circulation of print comics. Oliver and John stated that digital comics are better as a gateway to print for younger audiences, and Oliver further argued that there are different motives behind audiences for print and digital. He considered collectors and those who want an "invested" experience as the people who vouch for print comics, whereas

interactive, digital comics are for younger audiences who want immediate entertainment and the gist of comic stories.

These interviewees thought that interactive, digital comics are more of an interesting fad and tangential extension of comics, whereas the game design students saw more potential in this nascent medium. Hal told me, “I definitely think that interactive comic books can make a big scene. I think that could definitely happen in the future. As I said before, it just depends on the content.” I am inclined to agree with him. If the comics industry’s creators saw the potentially producible content I outlined in my analysis of the spectrum of digital comics, the whole genre would make a big scene.

The Inside Perceptions of Interactive, Digital Comics

Ben Wolstenholme is the Founder and CEO of Madefire (the studio that created the multimedia version of *Overwatch Issue #7: Legacy*), and Ondřej Novák is “half” of Motiv (the studio that produced *Murat: Non Stop Bar*). Even among comics industry pioneers like these two interviewees, I discovered through email correspondence that both of them have differing views of how much multimedia and interactivity should factor into and guide the design of digital comics.

Wolstenholme told me that he sees the current attitude toward digital comics as squandering the potential of “the native qualities of digital – sound, motion, depth [to] evolv[e] the overall grammar of the storytelling” of comics because they are meant for more than print and exclusively superhero stories. An example of his studio’s experimentation with sound, motion, and depth is when “you have the axis of time through a story – then the speech balloons themselves can have character and behavior – and 'act' or 'tell' the story,” which is similar to my ruminations over *Peace Walker* with

how the design of word balloons and dialogue should be experimented with. However, Wolstenholme stresses that these tools should only be used to a certain extent, citing McCloud and his discussion about the pivotal act of “closure” that the reader performs by filling in information between the gutters of panels. “[W]e may intimate a move but then let the mind of the reader fill it in – same with sound – we add sound for mood and story SFX but tend to avoid voice over as the experience moves from being 'active reading' to being 'passive watching'. . . . [F]ueling the imagination is our goal.” On the other hand, Novák told me that he and his business partner, Vojtech Šeda, were inspired to merge multimedia and interactivity with comics in as many ways as possible. “Animation, interactivity, and the sound resulted from many years of our work,” and this shows in *Murat*. I asked him whether their digital comic is a comic or not, but his response evokes a view of the medium in a similar manner to Neale’s understanding of process-oriented genres:

Definition of comics as a form can be changed. For example, I think that the very definition of American comic by Scott McCloud is already obsolete. Blending of form or genre in music, or the film is completely natural and I see no reason why it should not work in comics. I think that a good example can be seen in movie industry in the late twenties of the 20th century where the technology of sound brought soul to the movies. It is quite the same with comics where new technology finally allows us to connect audio and animation, two forms that comics have always needed to use. Interactivity, or whatever will be added in the future, is just a big bonus.

Wolstenholme has understandable restraint to maintain the “active” and paced experience of comics in the digital realm, but Novák believes fundamental aspects of mediums are always changing. I could not help but be reminded of Kress’ observations about the changing nature of literacy when Novák said, “I feel that we are at the beginning of the revolution. . . . Digital reader[s] (whatever we call it) will be here forever. Of course, [digital technology] has to be used to its full extent of possibilities.” He believes the arrival of tools like tablets and virtual reality mean that “reading by the image is already favored over reading of the linear text,” and he argues that this should be “reflected in the comics” to accommodate these changing norms. “Thanks to sound and interactivity we have a much better possibility of narration, the possibility of going beyond frame or the image itself.”

To Wolstenholme, animation and sound effects can be partially implemented while still leaving some imagination up to the reader, but something like full voice acting completely removes the imagination of how someone perceives a line being delivered. This is in opposition to my conclusions about voice acting, since word bubbles could amplify the interpretation of voice acting and do not nullify the key role of art to remain sequential. I would wager that a middle ground could be reached with limited voice acting, which can be seen in videogames where written lines are accompanied with small grunts, noises, and single words that capture the overall emotion of what someone is saying. But to move on from this point, he specifies that “the reader is in control of the reading experience” with Madefire’s *Motion Books* “and can go at their own pace – turning the page – otherwise it is 'video' and creates anxiety as it moves at it's [sic] own pace.” Much like my interviewee Arthur, he agrees that comics need to have the

semblance of turning pages for them to be comics since his studio has “generally tried to stand for 'great books' rather than bad videos or games.” However, he writes several paragraphs above this “that comics are far bigger than the form factor of the comic book alone.” Does this mean the act of turning pages in a *comic book* is necessary or not for *comics*? I would argue they are not, but Wolstenholme implies otherwise. Perhaps this has to do with a misunderstanding or conflation between comic books and comics on my part with the way I phrased my questions, but in any case, he would likely consider something like *Metal Gear Solid: Digital Graphic Novel* to be more of an animated movie that is only using comic art as a “video.”

Wolstenholme writes, “So I see comics as a really advanced grammar (Watchmen for example) for telling stories in words and pictures,” and Novák defines comics similarly as “storytelling by image” where “images are juxtaposed on the same level.” Novák adds that a comic book loses its materiality and “collecting” aspects when it transitions to the digital environment, which is an important distinction between art form and materiality/product when he talks about “comics” and “comic books.” He mentions how *Murat* could not have been possible in print as I suggested in my analysis, pointing out the page where the woman has to insert money into the gambling machine until she loses. “[T]he page is designed so that through reading the changes [it] can be read on (or otherwise).” I believe he is implying that ergodicity (i.e. non-trivial effort) is required on the reader’s part to interpret the design of the page in order to read on.

Thinking beyond comics’ traditional limits, Novák mentions, “We can now use 3D, VR or video, and new possibilities [of] juxtaposition, framing or movement itself.” He writes that these things would make him “very happy” because it is a sign that the

“[comics and videogames are] merg[ing] together into a new autonomous form.”

Wolstenholme surprisingly revealed to me his studio is currently developing new methods of spatial and sequential comic storytelling with tools to “allow real 3D publishing in X, Y, Z-axis and in 360 degrees” in virtual reality. This prospect would truly make the infinite canvas a more achievable reality. He still sees interactivity being reserved for videogames, but is adamant about the digital spaces’ affordances with new dimensions and multimedia for artists to explore. In other words, digital comic creators should be cautious yet experimental with interactivity and multimedia, but Novák wants to blow comics apart to see where the successes, and failures, of such an approach will take the medium. “All the ‘new waves’ emerge from destructing the rules of their predecessors,” he writes. “We are very lucky that we are at the beginning and we have a blank sheet ahead of us.” My interviews have shown me that digital comics are in a state of unsure transition. No one quite agrees on what must be preserved in terms of form and materiality or if explicit, ergodic interactivity should be involved, let alone multimedia. There are debates to be had and steps to be taken to determine what digital comics should be, especially in regard to the interactive kind. Based on all of my interviewees’ views on interactive, digital comics, they will not be going anywhere anytime soon.

Chapter 5 – Conclusion – A Digital Frontier

Digital comics are a curious sort. By having access to a mode where the creative limits are only restricted by one's imagination, figuring out what they can do opens a minefield of controversy about how a medium defined by its limitations should shake them away. The spatial, sequential, and silent nature of comics contributes to their word and image interplay with unique symbols and design, but rather than be rid of this or keep comics the way they are, what if there is a vein of innovation that can tap into amplifying what makes comics special by having multimedia and interactivity work with – not against or over – this medium? I laid out how the definition of comics should only be concerned about maintaining the comic's form and how the medium is defined by its hybridity. This focus means that remediation has played a major part in its development, which has only taken a bigger leap with the influence of the digital mode. This technology has revealed how materiality and some design conventions for print comics hold back innovation because of retro remediation because it maintains the old media with a desire for immediacy with traditional, digital comics. On the flip side, remediating comics too much results in shafting the old media for the new one with comic videogames that have overwhelming immediacy for videogames. However, a middle ground can be found with stylistic remediation guided by transtextual motivations to boldly present an old medium in a new one. Multimedia, digital comics can be a powerful means to realize this balancing act, but the strongest kind of stylistic remediation between comics and videogames is the innovative genre of interactive, digital comics. This particular subset of digital comics not only takes advantage of multimedia, but also explicit, ergodic interactivity. In doing so, interactive, digital comics demonstrate how

there is an incredible connection between the sequential and spatial design and storytelling of comics and videogames.

Interactive, digital comics meld the two mediums together with the digital space's affordances. Animation can allow for the perception of layers and changing relationships between panels, expanding the potential of sequential art with depth to make the infinite canvas even *more* infinite. Sound effects and voice acting allow word bubbles, dialogue, and symbols to operate alongside them and visually communicate additional nuances to the aural emotion and impact of audio. Interactivity can function as a component to add game mechanics, choice, and level design by giving new purpose and possibilities to the layout and construction of panels. I have only skimmed the surface of what interactive, digital comics can do to bridge the worlds of game and comics studies together, so others will need to follow in my wake to see how puzzle-solving can be integrated with panels, how to visually portray game mechanics with comic symbols and parts, what kinds of explicit and ergodic interactivity can be used to immerse users, and so forth.

Interactive, digital comics as a social genre are also not well known and ill defined, if my interviews are of any indication. Despite this status, a general consensus hangs in the air of this genre's importance and potential evolution to carve out a space of its own if the comics industry adopts a transformative approach toward the digital frontier. Likewise, audiences are integral in shaping the trajectory of interactive, digital comics, but people must break free of the genre function that establishes the impression that digital comics can only be traditional, digital comics when they are capable of being so much more.

On the bridge of remediation, most digital comics stop short with immediacy as traditional, digital comics or comic videogames. Others almost make it across as multimedia, digital comics with traces of hypermediacy. Those that cross the bridge step into a new dawn of stylistic remediation and the balance between hypermediacy and immediacy, remediation and adaption, and comics and videogames. I have only turned the first page on how interactive, digital comics game the comic, so others must flip through the other pages to ensure this promising medium's story does not end on a premature cliffhanger but continues onward with writers, artists, and fans that want to experience comics like never before.

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