



Writing Visual Culture

Volume

7.0



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Daniel Merlin Goodbrey

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Abstracts

7.2 'Comics and Control: Leading the Reading'

In an age of easily accessible digital technologies the mainstream comic book form is undergoing a series of transformative changes as it is more and more frequently adapted to the screen. The nature of this adaptation seeks to use functionality offered by the digital environment to change the form of comics and accommodate a wider range of storytelling media. The interactive digital environment of gestural controlled touch screen devices offers a wealth of new possibilities in both the reading and creation of comics in the modern age. Animation and sound, for example, can be used by the author to control the pace at which the reader receives information and story elements. Likewise the lack of the physical page can allow for more types of transition from one panel, or set of panels, to the next. However, this focus on the control given to the author by new media storytelling implies that outside of the digital environment the reader is always in control. In fact, this is not the case. The use of page layouts and the turning of the page can be used to control what elements are revealed when and which parts of the story can be seen juxtaposed next to which other parts. This paper will compare and contrast the control methods of the digital and print forms to outline the sets of rules that we use to further understand the reading processes of comics and digital comics. The aim of the paper will be to identify specific methods by which the creator can control the pace of reading in both digital and print media.

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7.3 'The Sound of Digital Comics'

This article explores the role of sound in comics and provides a critical analysis of how that role has changed with the digital remediation of the form. Comics are traditionally thought of as a monosensory and multimodal medium in which information is communicated through a combination of written and visual languages, relying solely on the reader's sense of sight. The digital mediation of comics has brought with it the potential for plurisensory comics that directly incorporate audible sound alongside the visual modalities of word and image. With reference to the theories of Groensteen (2013), Hague (2014), Smolderen (2014), Miodrag (2013) and Cohn (2013), this article considers the relationship between the imagined sounds of traditional comics and the perceived sounds of digital hybrids. It examines the use of both diegetic and non-diegetic sound, drawing on ideas concerning the role of sound in cinema (Chion 1994) and videogames (Nitsche 2008). Within this framework it considers the potential impact of audible sound on a comic's navigation, pacing, narrative and atmosphere. It considers a range of digital comics that feature audible sound and focuses its central case study on a new digital comic created as a practice-lead inquiry into the incorporation of audible sound with the comic form.

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7.4 'Motion Comics: The Emergence of a Hybrid Medium'

This article examines the recent emergence of the motion comic as part of a growing relationship between comic books, animation and new forms of digital entertainment and distribution. Motion comics typically appropriate the narrative and 'static' artwork of a comic book, which is then manipulated by animation software such as Adobe's After Effects to create an impression that is similar to paper-cut animation. Early examples of the motion comic form include the episodic web-based Broken Saints (Burgess 2001), as well as Saw: Rebirth (Shuter and Viney 2005). This article will reveal a number of motion comic aesthetics via a brief analysis of Watchmen (Moore and Gibbons 1987) (Hughes 2008). A number of interactive digital comic narratives are also explored, including Pocom (Gauld and Goodbrey 2003) and an overview of the app-based title, CIA: Operation Ajax (Burwen 2011).

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7.5 'Kick-Ass Version 2.0: The Superhero's Navigation of Comic Books, Film and Digital Media'

Formal properties of comics and digital media are represented through stylistic devices in the comic book and film adaptation of Kick-Ass. The interaction between the formal properties of different mediums can be understood through Jay David Bolter and Richard Grusin's (2000) concept of remediation, in which mediums influence and borrow from one another in a constant process. By discussing ways in which these interactions are presented in the both versions of Kick-Ass, this article explores comparisons that these texts suggest to exist between the spatio-temporal properties of, and experiences offered by, comics and digital media. Furthermore, analysis of the adaptation reveals that specific aspects of Hollywood technique, and the impact of digital technology on cinema, enable film to interrogate formal relationships between comics and digital media. The article also argues that the comparable types of control over spatial construction and temporal flow that comics and digital media offer audiences is paralleled by the actions of the protagonists in Kick-Ass, who achieve the spatiotemporal liberation superheroes enjoy by networking themselves through social media and utilising digital technologies.

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Daniel Merlin Goodbrey, University of Hertfordshire

Introduction

This edition of *Writing Visual Culture* is focused on the study of digital comics. Comics scholarship is a vibrant and a rapidly maturing field of academic study, but within this field the study of digital comics remains relatively under-theorised. Historically, the form of comics has developed within the constraints of the printed page. It can be found today in a variety of printed formats, ranging from serialised newspaper strips and comic books to larger collections and graphic novels. However, in addition to these paper-based formats, in the last thirty years new digital formats have emerged and steadily gained in popularity.

The earliest digital comics appeared in the 1980s, with titles such as Silhouette Software's *Redhawk* (1986) that mixed the visual narrative of a comic with the gameplay mechanics of an adventure videogame. While *Redhawk* provided the reader with a complex interactive narrative, in graphical terms it was severely restricted by the limited resolution and colour palette available to the early home computers for which it was designed. In the following years, as home computer systems grew in storage capacity and the fidelity of digital display increased, more graphically advanced digital comics began to appear. The popularity of multimedia CD-ROMs in the early 1990s saw several digital comics created to take advantage of the format (McCloud 2000, 208). Some operated as relatively straightforward adaptations of existing print comics while others were more complex affairs that incorporated sound, animated motion and interactivity (209).

In 1993 the ability to display inline images was added to the Mosaic web browser, contributing to a massive surge in popularity for the World Wide Web (Campbell 2006, 15). A new type of digital comic began to appear that was created specifically for consumption and distribution via the web. The increase in popularity of the web through the 1990s provided a mass audience for these new "webcomics" that continued to grow and diversify throughout the rest of the decade. The web allowed creators to reach a large audience of readers without incurring the production and distribution costs associated with traditional print comics (17). Although many creators experimented with different formats and layout of webcomic, by the early 2000s the most common format was that of the regularly updated, creator-owned serial. Instalments in these serials were typically laid out either in recreations of the traditional print comic page, or as single horizontal strips of three to four panels (similar in format to newspaper comic strips).



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Apple's launch of the iPad in 2010 led to the development of a new digital comic format adapted specifically for consumption and distribution via touchscreen-based, tablet computers. Here we arrive at the focus of our first article, Jayms Nichols' *Comics and Control: Leading the Reading*. Nichols provides an excellent introduction to the popular, tablet-based digital comic format by examining it from the point of view of the reader and the act of reading itself. He begins by underscoring the complexity of the form of comics and the multiple literacies it requires of the reader. By examining the reading processes specific to both print and digital comics, he establishes some of the key similarities and differences between these two formats. Particular focus is given to the role of the page and the page turn in controlling the release of information to the reader and establishing rhythms of reading. The implications of replacing the page with the screen are examined in detail, highlighting in particular the importance of the "naviscroll" as a replacement for the page turn. Alternatives to the page are then examined, including McCloud's 'infinite canvas' approach (2000, 222) and more granular methods of 'panel delivery' (Goodbrey 2013, 192).

Nichols' article also highlights the potential for digital mediation to introduce new hybrid elements to the form of comics, such as audible sound, animation, gameplay and interactivity. These threads are picked up in my own contribution to the journal, *The Sound of Digital Comics*. The main focus of this practice-led article is on the role of sound in comics and the ways in which digital mediation can successfully integrate audible sound into the form. It explores the conception of comics as 'an audiovisual stage on paper' (Smolderen 2014, 47) in which sounds are 'imagined rather than perceived' (Hague 2014, 65). Continuing another thread from Nichols, the article examines the diegesis of the word balloon and the implications this has for the integration of audible sound. Several webcomic examples of "audible comics" are analysed, with parallels drawn to the use of sound in film and videogames. For its major case study the article focuses on my own piece, *The Empty Kingdom* (Goodbrey 2014), exploring in detail the construction and operation of the responsive soundtrack created for the work.

The hybridisation of comics with sound and motion is further explored in Craig Smith's article, *Motion Comics: The Emergence of a Hybrid Medium*. Smith examines the hybridity of the animated motion comic within the context of comics' growing influence on popular film and television. He identifies a range of examples from amateur, fan-made constructions to professional, transmedia productions. These serve to demonstrate both the medium's growing popularity and the fundamentals of its operation. The article provides a detailed examination of the aesthetic qualities of motion comics and the practices involved in their production. The motion comic version of Alan Moore and Dave Gibbon's seminal *Watchmen* (1987) serves as a case study for the process of adapting an existing print comic narrative. Contrasted against this is the study of an original motion comic, *CIA: Operation Ajax* (Burwen 2011), which also highlights the potential for incorporating further interactive elements within the form.

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The final article in this edition is James Taylor's Kick-Ass Version 2.0: The Superhero's Navigation of Comic Books, Film and Digital Media. Taylor builds on the contextual themes established by Smith; his paper provides a detailed consideration of the convergence of comics, film and digital media through its analysis of the comic book Kick Ass (Millar, Romita and Palmer 2010) and its later cinematic adaptation. The article examines the various ways these converging forms of media are represented and remediated within one another. In this manner the key formal properties of each medium are identified and shifts between immediacy and hypermediacy are highlighted (Bolter and Grusin 2000). Special focus is given to the portrayal and usages of social media and the digital distribution opportunities afforded by the World Wide Web. These are considered both in relation to comics and the concepts of the superhero and super powers as depicted in the narrative of Kick Ass.

I will conclude by offering my thanks to the contributors to this edition of Writing Visual Culture for all the time and hard work they have poured into their articles. I'd also like to thank our referees for their excellent critique and feedback. An extra-special thankyou goes to Dr Ian Hague for kindly volunteering to step in and organise the blind peer review process on my own article. Finally, I'd like to thank Writing Visual Culture's editor in chief and leader of the TVAD research group, Dr Grace Lees-Maffei for inviting me to guest edit this edition of the journal and all the invaluable advice and support she has provided along the way.

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Jayms Nichols, University of Hertfordshire

Introducing Digital Comics

With the emergence and widespread adoption of digital technologies such as tablets and smartphones giving people the opportunity to access media artefacts at any time via the internet, there is a cultural shift in how information is being found and consumed. With a tendency towards delivering content digitally alongside or instead of traditional paper-based formats, we can see a marked change in the possibilities of what media artefacts can do and how they are presented. With this shift in the way a medium is presented to us we see a change in how we consume it and read its content. Whilst this is true of a number of media forms it is of particular interest in comics where, with the mass adoption of digital downloads from online stores, there are a wealth of different forms that the comic is beginning to take. Even outside of the digital environment, comics is already a complicated form which requires us to have knowledge of and participate in several different reading skills. We must be able to read not only text and image but also a number of other types of information presented to us in different ways such as comic specific elements like word balloons, panel borders and different types of frames. Most importantly we must be able to swap back and forth between the different cognitive skills associated with these forms constantly throughout our reading process. An artefact which asks us to use this combination of different types of reading skills is known as requiring multiple literacies, which are defined by Purcell-Gates as “the many and varied ways that people read and write in their lives” (2002, 376). The use of these multiple literacies makes comics reading an advanced and involving process which requires a combination of reading skills. Many comics theorists recognise this to be the case as Lavin sums up nicely when, in reference to Will Eisner and Scott McCloud, he states that “both suggest that the perception of sequential art requires more complex cognitive skills than the reading of text alone” (1998, 32).

Reading Multiple Literacies in Comics

It is this collection of multiple reading processes that we must consider when we produce comics for the digital environment. There are a number of format specific reading processes that must be observed when we read comics in their various forms. It is these reading processes that this paper will discuss with a focus on the differences and similarities of print based comics and the various forms of emergent digital comics.

Traditional paper based comics use multiple literacy devices which must be read by the audience so that the story can be understood. These can then be referred to as the multiple literacies of comics and include text, image and comic vocabulary (comic specific elements which are defined further later)



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literacy readings. Each of these parts has its own set of reading rules and conventions which we must be able to interpret and understand individually before we can understand the comic as a whole.

Text reading requires us to understand letters in order to be able to form words, which when put together become sentences. We then have to know the meaning of those words and sentences and apply a grammar system to them in order to understand their meaning in context next to one another. When reading a continuous prose novel this is what we do and it makes up a singular literacy. Similarly, in image reading we perform a number of specific reading actions like those that allow us to understand the letters and words of text. Of course our reading methods here require a different collection of attributes and skills to give our picture a meaning or a reading. That is an important definition to make; when we read something we give it meaning. In image reading we must understand the figure and the ground and be able to tell which is which, and further from that what action, if any, the figure might be performing. Our eye movement here is also different to that of text in that it is not necessarily predetermined by our culture as it is in our reading of text. That is to say, it isn't always left to right and may start in the centre and work its way out or a number of other alternatives based on the reader's experience and the author's intent.

In comics we must perform these text and image reading skills and be able to switch from one set to the other and back again throughout our reading, constantly relating what we have read in the image to what we have read in the text and vice versa. Whilst these two commonly used and understood sets of literacies make up a part of the reading, comics also include a third set of reading codes and conventions native to comics. These relate specifically to the reading of comic vocabulary elements. The term comic vocabulary used here refers to the comics specific elements which contribute to the meaning of what is written or drawn elsewhere in the page. These comic vocabulary elements include panels, frames, the gutter and word balloons, which are a part of the comics' language and inform the meaning of the text within. They also include a comic's "meta-rastic indices" (Nichols 2013, 304), which are the visual cues within the comic that indicate the intended reading path to the reader and inform our reading movement through the narrative.

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Fig.1. Speech Balloon.



Fig.2. Thought Balloon.

The word balloon is a good example of the ways in which these multiple literacies work together to form a singular reading of comics as they combine elements from each of the three primary literacies that make up comics reading as a whole. Firstly you have the text which is contained within the image element of the balloon and then in turn the balloon has its own comic vocabulary meaning depending on its visuals. These meanings then reflect on the meaning of the text. For example, in [Fig. 1] the balloon represents speech which both gives the text the reading or meaning of spoken, diegetic words and the image of the balloon itself as being non-diegetic and not existing visually as part of the story world. All three literacy elements are read and understood together as one cohesive thing representing the words being spoken. When we look at [Fig. 2] however, the comic vocabulary element of the balloon is different and this changes the meaning of the text. In this case the balloon, and therefore the text, represents thought which gives us a different reading and understanding of the content.

Word balloons come in a variety of different types and each of these types gives a different meaning to the reading. So if you have a traditional balloon like [Fig. 1] it has a different meaning to the balloon in [Fig. 2], even though the text content is the same. This is all part of the visual language of comics and is detailed by Will Eisner in his book *Comics and Sequential Art* (Eisner 2003).

Word balloons are just one of the ways which the multiple literacies of comics work together to build their own unique form and there are many more that I won't detail here. However this serves as an example of just how complex the reading process of comics is, even before we begin to add the reading skills associated with media presented on screen.

The digital environment of the screen has its own set of multiple literacies and allows for a massive collection of multimodal media readings in one delivery medium. When information is delivered on the screen we are able to read not only the text and image of print but also sound, video, ludic and interactive elements depending on the source. These elements do not all have to appear together in



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one place but they can do in many cases and each has its own set of literacy skills associated with it. When reading a web page for example it is likely that there are both text and image elements involved as well as embedded videos with sound and interactive links for navigation. Each of these parts has its own reading rules associated with it, and forms a complex set of multiple literacies required for reading on screen. When we combine this set of literacies with the already complex reading of comics, we can further complicate the reading processes needed to understand the narrative being told. However, the addition of these digital elements leads to a number of new possibilities for comics as a form that are not available in their paper based formats. One such change is in the ways that authors can deliver information to the reader.

The Reading Rhythm of Print Comics

Before we look any further into how comics work in the digital form and what the environment of the screen can allow authors and readers to experience, it is important that we understand and outline how the print form of comics works. Comics have always evolved alongside the media of the time and print comics are no exception to this rule. Today comic books exist as part of the codex book form and this form brings with it its own set of reading rules and behaviours. In terms of form, the codex is the word used to refer to a number of leafs of paper bound together along one side to form pages. It is these pages which are the defining feature of the print comics we know today.

In [Fig. 3] you can see a single sequence of a paged comic book and the order in which we read the sequence based on the meta-rastic indices. As discussed earlier, these are the rules that govern the order in which we read the panels using the three primary multiple literacies of comics; text, image and comic vocabulary. What is important about this sequence is that the order in which the reader experiences the events in this page sequence cannot be controlled by the author. Even if the author

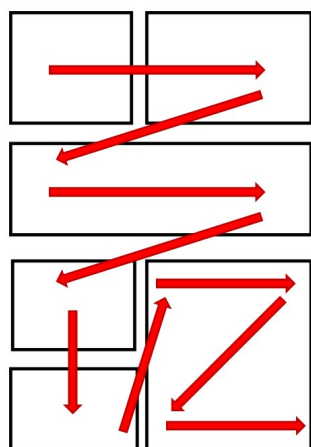


Fig.3. Reading the Page.



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intends it to be read in the way shown by the arrows they have no control over whether the reader looks at the entire page before the first individual panel in the sequence. Or to the last panel first, before reading the entire sequence. This makes it very hard to control the release of information in the story. However that is not to say that the author has no control over the reading process of the comic book as a whole. By using the codex form itself, the release of information to the reader can be managed. For this reason comic books are very often written to the turn of the page. By this I mean that the comic book uses the turn of the page as a narrative device in a number of ways to enhance or control the narrative experience of the reader.

The page itself can be used as a type of framing device for the panels within it. Referred to as a “hyperframe” by Groensteen (2007), the page has a relationship with all the other panels and hyperframes surrounding it throughout the book. This relationship comes with its own set of reading processes. The author can use the relationship between the hyperframes to distance information, for example changing the location inside the world of the narrative when the page is turned and thus enhancing the feeling of having moved from one place to another. Alternatively, information can be held back to create a desired narrative effect. Perhaps the author wants to shock the reader and so holds back the surprising element of the narrative to reveal it on a page turn, thus preventing the reader from reading the surprise element before the set up. This could also be done with jokes, revealing the punch line only after the page is turned. Or in horror, using the entire sequence of panels on one page to build the tension and then revealing the horrific event on the next. It can even be used simply to add extra impact to the unexpected appearance of splash pages or panels in the following hyperframe. These are just some of the ways creators use the page turn for narrative effect and it has become one of the primary ways for authors and artists to control the experience of the reader.

The page turn also plays a part in another important narrative control method for authors, and particularly artists, which is what Paul Atkinson refers to as the “visual rhythms that inform the reading movement” (Atkinson 2012). The visual rhythm is a significant part of reading comics and refers to the rate at which we move from panel to panel and the time we spend paused in contemplation of the content within them. The control of this reading pace or rhythm is primarily created using different combinations of the three core multiple literacies of comics, but it can also use the turn of the page for extra emphasis. How much time is spent looking at and contemplating each panel depends on the content of said panel, but there is a constant driving force in comics which leads the reader from one panel to the next and makes them want to move on. However, when a reader reaches the end of the gross sequence of the page they are likely to pause to consider the meaning of the entire hyperframe as a whole before moving on with the narrative. The turn of the page helps to facilitate this contemplation process by offering a moment where no more information is presented.



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It is evident that the form of the codex book is an important part of the control offered to the author and dictates some of the narrative devices that are used to tell the stories of comics in the ways we most commonly know them. It is of no surprise then that many comics in the digital environment try to mimic this turning of the page in the same way and often simply repurpose comic books for the screen rather than reinventing them.

The Content of Digital Comics

The importance of the page in the print comic is something that cannot be overlooked when discussing how we read comics digitally. The page and the hyperframe it contains offer a large number of narrative devices to the author and a primary way of controlling the reading pace and rhythm of the story. In digital comics the page is replaced by a screen. This screen can come in many different types and sizes, from the small screen of the smartphone display to the much 8 larger display of the computer monitor. However, one format where comics have best been able to retain their original page layout, is on touch screen tablet displays. Ten inch screens like the ones found on the Apple iPad and Samsung Galaxy tablets offer a similar size and shape to the standard 2:3 ratio of the American comic book page. This allows for similar layouts to be used and therefore similar narrative devices. The similarity has facilitated easy re-purposing of traditional print comics to screen and in turn has contributed to a transitional period in which mainstream comics have been able to exist for consumption both digitally and in print forms with little difference between the two.

However, the screen does not have physical pages that you can turn or flick through. We can't navigate from one hyperframe to the next in the same way as print, meaning that an alternative needs to be used. The most commonly used options for mimicking a page turn on a digital touch screen like those found on a tablet are either tapping or swiping the surface of the display. These actions can be referred to as "naviscrolls" (Nichols 2013, 308). The naviscroll is similar to the page turn in that, once learned, it requires little cognitive thought and does not break the audience from the flow of the reading sequence. This is an essential part of what makes comics work well as a form of storytelling, so it is important that this redundancy translates over to the digital space along with the page-by-page view of the comic being digitised. The naviscroll is a very important part of the reading process of comics on screen. Whether it is a swipe which 'feels' like turning a page or a tap to continue, it is the action that allows us to experience the comic in a similar way to that of the codex book. With the naviscroll action taking the place of the page turn and the screen being of a similar size to that of the printed page, the same narrative devices can be used by authors and artists in the digital format.



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The digital environment of the screen also offers a wealth of other options to the comics form. However these may change both the reading processes and the narrative devices available to readers and authors. Screens offer a number of multimedia possibilities which can be integrated with the already existing literacies transferred from the print comic form. Each of these new media elements comes with its own set of reading rules and literacies which must be learned by the reader if they are to be understood as part of the comic.

One of the key differences between the print environment and the digital one is that the digital hyperframe is not restrained by the physical size and shape of the page and can therefore be of almost any shape or size the author desires. If we consider the screen not as a page with a fixed dimension but instead, as McCloud suggests in *Reinventing Comics*, as a window through which we view the content, we can then begin to change the strict rules by which the layout of the content and therefore the narrative devices have been built (McCloud 2002, 222). McCloud also suggests that this type of comic, containing only one hyperframe, can be referred to as having an infinite canvas. However, as the infinite canvas has only one hyperframe, it is difficult to produce the same narrative results as when navigating traditional print comics. What can be used instead is what can be referred to as the expanded canvas. A comic using the expanded canvas concept might use multiple hyperframes shown independently of one another in the same way that pages in a print comic operate. Except here each hyperframe may be of a different shape and size and expand beyond screen area, requiring us to move the window of the screen to view the full narrative before moving to the next hyperframe. The practice of using extended canvases is most commonly found on browser based webcomics such as Dresden Codak (Diaz 2014).

The multimedia nature of the screen offers a huge wealth of things that can be added to the panels of a comic. These have been used to varying degrees of success in digital comics designed specifically for the screen, a majority of which are experimental in nature and available via the internet as webcomics. The multimedia aspects of the screen also allow for digital comics to include non-static elements of video or animation. Some digital comics use animation within panels for short looped actions that add a sense of motion or life to the frames, whilst others use animation more heavily to provide timing of the transitions from panel to panel. When looking at this from the perspective of rhythm and author control as we did with the page turn, animated elements offer something that the printed pages cannot; an explicit sense of time and movement. In a digital comic which uses animation to dictate when the current panel disappears and the next panel appears, the management of reading time is taken from the reader and given to the author. This allows for a much tighter control of suspense and the revealing of narrative points.



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The reading literacies of this type of comic have a large amount in common with those of film, where we do not control at which pace we absorb information. It can even be argued that in some cases, like motion comics, the format actually more closely resembles animation than it does comics. However, other forms of digital comic integrate the motion of animation in such a way that it does not interfere with the already established literacies and instead becomes an additive process which can enhance the reading experience. Webcomics like *When I Am King 10* by Demian5 (2001) use simple loops of animation well in creating comics which still allow the reading rhythm and reflection time to be determined by the reader.

Digital display devices also often have built in speakers which offer creators the option to add sound to the visuals of the comic. Similarly to video or animation, sound is inherently temporal in nature and can be used in a number of ways which effect the time perceived in the comic. For example, if a character's dialogue is represented using sound created by a voice actor, the speech of that panel will often dictate the length of time that the moment depicted in that panel lasts. Another way of using sound in comics is for background music or ambient sound to play during the display of a certain hyperframe. This sound is read in the same way it is in a film, with sound designed to build tension or convey a variety of emotions through the use of particular scores, sound effects, tempos or tones. Sound might also be used to enhance visual onomatopoeia, through loops of sound effects or in a variety of other ways to enhance the narrative experience.

These are all ways that the digital environment can add to the multiple literacies of our reading of comics and expand on the already existing comics experience. One way of using some of these digitally exclusive elements is the development of "panel delivery" (Goodbrey 2013, 192) comics.

Digital Native Guided View Comics

Panel delivery comics are a type of digital comic which have changeable content controlled by the reader. Changeable content refers to objects or images displayed on the screen which are changed, updated or animated in some way when progressing through the narrative. For example, speech balloons can appear or change when the naviscroll is performed. This allows for a conversation to occur between characters in a way previously left to large, cumbersome blocks of text or multiple repeated images with varying text elements. Other changeable content elements include characters appearing in the panel, the change from cause to effect as an action is performed or frames and panels appearing in juxtaposition to show the next part of the sequence. These can be used much like the turn of the page to hold back information, create suspense or deliver surprises. The number of panels on screen and what happens within them can be left



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entirely up to the author and is not limited by the size of a fixed page as it is in print comics. It also gives the author much more control over the release of information to the reader without taking away control of the reading rhythm of the narrative. Coupled with the use of animated panels, the author can also add the sense of movement and dynamic action that animation allows whilst still keeping the format recognisable as comics.

Changeable content is something that is being used more commonly by mainstream, larger comics companies such as Marvel and DC. Digital-only comics like *Guardians of the Galaxy* (Bendis and Oeming 2013) and *Batman 66* (Parker and Case 2013) represent a marked shift in the ways comics are produced for the screen. The panel delivery form of these comics is a way of using the unfixed nature of the screen to show comics in a format that is specific to the screen but is still recognisably comics. It requires us to perform some altered reading tasks, like the ones detailed in this paper, further adding to the multiple literacies that we must possess and the number of reading acts we must perform and understand. However it also allows for an evolution of the form in a world where multimodal reading is becoming a much more normal activity. If used properly it can benefit both readers and authors with a richer set of presentation and delivery options, thereby giving a more varied reading experience. The author also gains more control over the number of panels he or she wishes to show and when to reveal important narrative information, whilst also leaving the control of the reading speed up to the reader.

With the shift towards content being accessed digitally on portable display devices and an increased demand for media artefacts to be available for consumption on screens, we can see a change in the forms that comics take. With this change comes new opportunities to take advantage of the multimedia capabilities of these devices and an evolution in the ways we read comics on a day-to-day basis. These changes are still happening and digital comics have not yet developed a standardised form on screens. However with the new options for narrative devices and controls offered to creators by the digital environment, we are likely to see digital comics become more divergent from their print parents as they continue to grow and change.

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Daniel Merlin Goodbrey, University of Hertfordshire

Introduction

In *Comics & Narration* (2013), Thierry Groensteen states that traditional comic books are monosensory, relying solely upon the sense of sight. In contrast to this he identifies digital comics that incorporate elements of audible sound as being “plurisensory” (69). During my career as a comics’ practitioner I have created a number of plurisensory digital comics that incorporate elements of audible sound. In recent years this interplay between sound and the form of comics has gone on to become a central part of my research and practice. In this article I will examine the format of the ‘audible comic’ by drawing examples from both my own practice and the work of contemporary digital comic practitioners. Included amongst these examples will be my most recent major work, *The Empty Kingdom* (Goodbrey 2014), which was created as a practice-lead component of this inquiry. During this article sound will be considered as both an element of navigation and of narrative. The differences between imagined and perceived sound will be outlined and the relationship between sound and diegesis in comics will be explored in detail. Parallels and influences from the use of sound in film and videogames will be examined. Included in this examination will be a consideration of the ways in which sound can influence the act of reading and the implications of this for digital comic formats. Different approaches to the integration of audible sound will be explored, with an emphasis placed on the importance of reader control over the play and synchronisation of audible elements.

Sound in Navigation

Groensteen’s monosensory view of traditional comic books is challenged in *Comics and the Senses* by Ian Hague (2014), who asserts that the experience of reading a comic book has on some level always been a plurisensory one. Hague notes that the act of reading a comic book is not silent and that “the sound of a turning page emphasises the ‘objectness’ of the comic” (72). He also states that:

Though they could be classed as incidental, these sounds comprise elements of the comic’s character, they tell the reader certain things about the progression of the text and the modification of the comic as an object (65).

In the earliest of my own experiments with sound in digital comics, my approach was to treat audible sound much as Hague outlines above. In the comic *Doodleflak* (Goodbrey 2002), the reader is presented with a zoomed out view of the entire comic, arranged in the pattern of a snowflake. They can then click on individual branches of the flake, which initiates an animated zoom and rotation that allows them to read their chosen section of the comic. Audible sound is used as part of this



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navigation process, with one sound playing to accompany the act of zooming in, and a different sound playing when the reader chooses to zoom back out. Just as animation has been used as a replacement for the motion of the page turn found in a typical paper-based comic, so these effects serve as a replacement for the sound of the page turn. This approach therefore treats audible sound as an element of the digital comic's character and uses it to give information about the progression and modification of the 'virtual' comic object.

Sound in Narrative

Another approach to incorporating audible sound into a digital comic is to treat that sound as an element of the comic's narrative. This approach is made possible due to the multimodal nature of comics which are, as Neil Cohn notes, "essentially written in two languages: the visual and the written/verbal" (2013, 13). Within the multimodal narrative of a paper-based comic, sound is represented by images and words on the page and is "imagined rather than perceived" (Hague 2014, 65). Thierry Smolderen attributes the origins of this multimodality to a period of experimental "graphic hybridization" (2014, 47) that took place during the 19th Century. The result of this experimentation is a hybrid form that operates as "an audiovisual stage on paper" (ibid). Smolderen asserts that it is this hybridity in comics that provides the opportunity for further hybridisation with other forms and media (60). In a digital comic, the potential exists to extend the multimodality of the form to also incorporate elements of perceived, audible sound. Sounds that become part of the diegesis of the story and "are consciously integrated into the work to supplement or even facilitate the narrative" (Hague 2014, 73).

To examine the role that audible sound might play in the narrative of a digital comic, it is helpful to first examine the concept of diegetic sound in more detail. In the medium of film, diegetic sounds are sounds presented as originating from a source within the story world of the narrative, while non-diegetic sounds are sounds that come from a source outside the world of the story (Bordwell & Thompson 2013, 284). These same definitions can also be applied to comics. In Doodleflak, the use of audible sound as an element of navigation is clearly non-diegetic, as the sound has no clear origin within the story world of the comic. In contrast, the visual representation of imagined sound on the page can at times demonstrate a more complex relationship to the diegesis.



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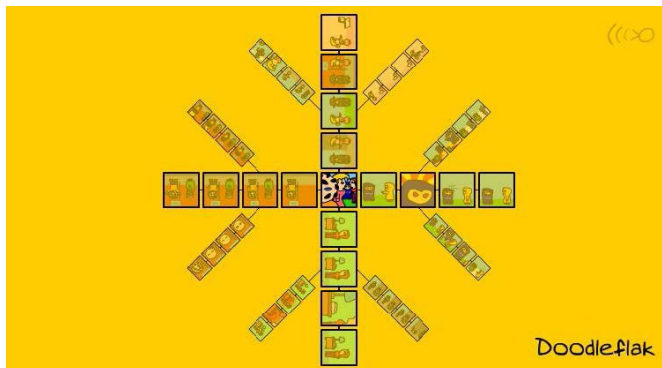


Fig.1. Daniel Merlin Goodbrey, Doodleflak, 2002, hypercomic. Permission granted by the creator.

Limited compositional space means that comic creators are selective about which sounds they chose to represent on the page. Usually, only those sounds that directly serve an aspect of the comic's narrative are displayed. One of the primary devices used to represent sound within the narrative is the balloon, which is used to convey the spoken words or sounds of the various characters and objects that inhabit the comic's story world. Smolderen describes the speech balloon as "a reified image of human speech" (2014, 53) that situates the speech "as a sound object within the image" (ibid).

In examining this function of balloons, Hannah Miodrag notes that while they are:

not visible in the world-of-the-work as they are to the reader, these forms represent diegetic material nonetheless, visualising for the reader what is audible for characters (2013, 100).

The balloon itself is a non-diegetic container or carrier; a signifier of speech that exists outside the story world. But the contents of the balloon are diegetic, as they represent the direct speech of the characters within the story world. Cohn provides a useful examination of the balloon in its role as a carrier of diegetic content:

Carriers function to encapsulate text (or images) that interface with a 'root' through a 'tail.' With speech balloons... ...the balloon is the carrier, the speaker is the root, and the tail is the tail of the balloon (2013, 35).

In a digital comic, attempts to integrate audible diegetic sound are problematized by the lack of such elements to contain the sound and connect it with the events being visually depicted. As a result, the role of the rooting object becomes more significant in providing audible sounds with a visual point or origination within the narrative of the comic. An example of this can be found within my own practice in the webcomic series, *The Mr. Nile Experiment* (Goodbrey 2003). Mr. Nile was a



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metafictional series in which the titular protagonist carried out a series of experiments in an attempt to determine the nature of his fictional reality. The twenty-second instalment of the series depicts Nile standing next to a small radio, which he explains to the reader is:

*an avatar, really. Something to give the sound a point of origin within the narrative... [and]
...I'm going to need just a little help on your end to synch things up (2003).*

The rooting object in this case also functions as a button which the reader is required to click in order to switch on the radio. Once the radio is switched on a piece of audible music begins and Nile can be observed visually reacting to the music that both he and the reader can now 'hear.' In requiring the reader to click on the rooting object to start the music, it not only integrates the music into the diegesis of the comic, but also aligns the sound to a specific point in the reader's progress through the "temporal map" (McCloud 2000, 207) of the comic.



Fig.2. Daniel Merlin Goodbrey, *The Mr. Nile Experiment*, 2003, webcomic. Permission granted by the creator.

A different approach to the integration of audible music into the diegesis can be seen in another webcomic from the same period, *Devil in the Kitchen* by Kean Soo (2003). The narrative of the comic follows a group of friends watching the musician Ashley MacIsaac playing a gig at a local music venue. The layout of the comic is in a similar "infinite canvas" (McCloud 2000, 222) style to *Mr. Nile*, with the



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panels arranged on one long webpage which the reader scrolls through to read. However, unlike Mr. Nile, a play button and progress bar for an mp3 file sits separately from the comic at the top of the webpage. To experience the visual narrative of the comic and the audible music track together, the reader must first press play on the mp3 file before then commencing to read and scroll through the comic. As the audio recording of the titular instrumental track Devil in the Kitchen plays back, its exact relationship with the diegesis of the comic is uncertain. Rooting objects such as a set of drums, a guitar and a fiddle can be seen in repeated panels in the comic, offering potential points of origin for the music within the diegesis. But mixed in with these are several panels showing the reaction, excitement and applause of the listening crowd, the audible sounds of which are noticeably absent from the mp3 recording.

Ultimately it is the placement of the mp3 player outside the diegesis of the comic that proves most problematic to the integration of the audible music track as, unlike Mr. Nile, the comic lacks any fixed points of synchronisation between the soundtrack and the events being visually depicted. This distinction places Mr. Nile into the category identified by Hague as “sounds in comics” (2014, 73) while Devil fits better in the alternate category of “sounds with comics” (77). This latter category is typified by the reader listening to an audible sound recording while reading a separate comic narrative, without any points of direct synchronisation occurring between the two. Although this is not to say that the two share no interaction at all. To take the example provided by Devil, it is noticeable that the high tempo of the musical track can influence the reader to adopt a faster pace in their reading and scrolling of the comic. Hague notes that the more audible sound is relied on to set the reading pace, the more the:

visual content of the comic is subordinated, in temporal terms, to the audible, which directs the speed at which the performance should take place. (77)

Parallels to this can be drawn from the relationship between sound and image in film. Michel Chion notes in his seminal work on sound in film, Audio Vision (1994), that on “first contact with an audiovisual message, the eye is more spatially adept, and the ear more temporally adept” (11). However, for digital comics this is a potentially problematic phenomenon. The mediation of comics in digital media has introduced the potential to included animated, time-based elements to what was previously a spatial, non-time-based form. This has in turn served to highlight the importance of the reader remaining in control over the pace of their reading. Digital comics pioneer John Barber asserts that “in reading, the reader controls the rate at which information is absorbed. This is inherent in comics; this is what separates comics from film” (2002, 7). Similarly, in an earlier examination of the digital remediation of comics, I concluded that “in digital comics,



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for a digital comic to still operate as a comic, the rate at which information is absorbed must still be set by the reader” (Goodbrey 2015, 70).

Responsive Soundtracks

The nature of this potential conflict between reader control and audible sound is highlighted by Groensteen, who identifies two different temporalities at work in audible comics, “the concrete, measurable time of motion and sound, and the indefinite, abstract time of comics narration” (2013, 70). He then goes on to outline the negative impact this can have on the reading experience:

Comics readers generally set their own rhythm, with no constraints; as soon as they have to make allowances for the exact length of an animated image or sound, the reading process must be synchronised with these additional factors, and readers’ freedom is sacrificed - or else this synchronization may already have been programmed by the author, who therefore also imposes the rhythm at which the images scroll (70).

To overcome this problem, the key lies not in making the reader adapt their reading to the audible soundtrack, but instead making the soundtrack adapt and synchronise to the process of reading. In Nile, the clickable rooting object acted as a somewhat crude form of reader-controlled synchronisation. While useful in a metafictional story with direct reader-character interaction, such a technique would be less appropriate in a more traditional narrative, where the non-trivial effort of clicking to activate the sound might interrupt the reading process. Hague describes a more elegant approach to the problem, in which the reader navigates through the comic and:

the sound system is set up in such a way that the soundtrack responds to the reader’s position in the narrative, replaying sound effects or adjusting the soundtrack to fit the relevant panel (2014, 76).

The result is an audible comic with a truly responsive soundtrack in which “the reader is... ..given control over the way in which the soundtrack functions” (76) and there is no interruption of the reading flow. A good example of this approach can be found in the third part of Stevan Živadinovi’s webcomic, *Hobo Lobo of Hamelin* (2011). The comic’s narrative is a take on the Pied Piper of Hamelin legend, with each part of the story laid out in a sideways-scrolling infinite canvas format. In terms of the comic’s use of audible sound, it is interesting to note that many of the concepts identified by Chion in his analysis of film soundtracks can also be seen at work in the responsive soundtrack of *Hobo Lobo*. Foremost of these is the principle of “added value” which Chion defines as:



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the expressive and informative value with which a sound enriches a given image so as to create the definite impression... ...that this information or expression “naturally” comes from what is seen, and is already contained in the image itself. Added value is what gives the (eminently incorrect) impression that sound is unnecessary, that sound merely duplicates a meaning which in reality it brings about, either all on its own or by discrepancies between it and the image (1994, 5).

Part three of Hobo Lobo opens at night on the edge of the woods. Accompanying the artwork that establishes this scene is a looping diegetic soundtrack that consists of the ambient sounds of the forest at night. Chion describes sounds used in this way as “territory sounds, because they serve to identify a particular locale through their pervasive and continuous presence” (75). He notes that such ambient sounds can envelop “a scene and inhabit its space, without raising the question of the identification or visual embodiment of its source” (75). In this instance none of the animals and insects responsible for the sounds in the soundtrack can be seen. Instead it is the overall image of the forest which can be thought of as the rooting visual element within the comic.

In response to the reader scrolling through the comic, a piece of harmonica music slowly fades up in volume as on the screen a parade of rats can be seen making their way through the forest. Initially the relationship of the music to the diegesis of the story is uncertain but as the reader continues to scroll the rooting image is revealed; the comic’s lupine protagonist playing his harmonica and leading the parade of rats. Chion identifies a similar phenomenon in film, where music can “narrow into” (81) the diegesis once the originating instrument appears onscreen. According to Chion, shifts in music between non-diegetic and diegetic can happen “at a moment’s notice, without in the least throwing into question the integrity of the diegesis” (ibid).

The rat parade then reaches the cliff edge and the protagonist ponders the wealth he will receive when the rats plunge to their doom. Accompanying this sequence a low, ominous droning sound begins to build in volume, creating a sense of foreboding as to the fate that lies ahead for the rats. This is a good example of the way sound “vectorizes or dramatizes” (13) a sequence, creating “a feeling of imminence and expectation” (13-14). The sound of a bell tolling is heard, accompanied by the appearance of a bloody scythe on the screen, and then the comic transitions into displaying a series of surreal images of fine dining, wealth and high living. Alongside this visual transition comes a gradual change in the soundtrack from diegetic to non-diegetic, with the harmonica fading out completely to leave only the sound of the ominous, un-ending drone.



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Hague asserts that digital comics with responsive soundtracks “require a relatively modular approach to the sound design” (2014, 76). This modular approach can be heard at work in Hobo Lobo’s soundtrack, which essentially consists of a series of sound loops and spot effects, setup to play or fade in and out in response to the reader’s scrolling progression through the comic.

of its construction also invites comparisons to the use of sound in videogames. Games theorist Michael Nitsche identifies the use of “adaptive audio” systems in games that offer “a dynamic change of a playing musical piece in relation to the user’s interaction” (2008, 135). The resulting combinations of sound effects and music used in games create “navigable soundscapes” - flexible compositions where a “player’s spatial exploration is also a journey through a varying soundscape” (141). As Hobo Lobo has shown, despite their modular nature these soundtracks are capable of many of the same evocative flourishes found in film and games. Indeed, Nitsche asserts that:

Elaborate soundscapes can build up a dramatic foreshadowing, provide direct acoustic engagement up to the climax, and mark an end with a cathartic aftermath (142).

Responsive soundtracks are one example of crossover between videogames and digital comics. As part of my recent practice-lead research I have been examining the potential for direct hybridisation between games and comics to create “game comics” that “make specific use of the key characteristics of comics in the mechanics of their gameplay” (Goodbrey 2014b, 7). In setting out to create a series of prototype game comics to explore this potential hybrid form, I have also been drawn back into experimenting with the possibilities for audible soundtracks in digital comics. The first of my prototype game comics to feature such a soundtrack was the comic and adventure game hybrid, *Icarus Needs* (Goodbrey 2013).

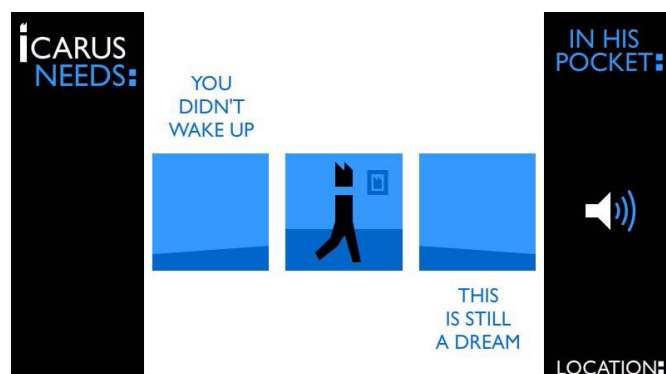


Fig.3. Daniel Merlin Goodbrey, *Icarus Needs*, 2013, hypercomic. Permission granted by the creator.



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The narrative of Icarus focuses on the plight of cartoonist Icarus Creeps, who falls asleep playing a videogame and then finds himself stuck in a surreal, metafictional dream world. The player navigates the comic via the arrow keys on the keyboard. These move Icarus from panel to panel, allowing the player to explore the dream world and solve the puzzles it contains. The comic features a responsive, non-diegetic musical soundtrack, influenced by the adaptive audio systems commonly found in adventure games. However, my initial intent with Icarus had been to create a more complex soundtrack, with elements of both diegetic and non-diegetic sound that would respond to the user's exploration of the environment and narrative progress. Ultimately, sourcing appropriate sounds and synching these to the player's actions proved to be a greater challenge than anticipated. To avoid significantly extending the development time I opted instead for the simpler musical soundtrack, with changes in the soundscape keyed primarily to transitions between different environment types (such as from inside to outside, or outside to underground).

The Empty Kingdom

It was the desire to more fully examine the use of audible sound in comics that lead directly to my next game comic project, The Empty Kingdom. The plot of Kingdom follows a videogame player who logs into an empty Massive Multiplayer Online (MMO) game, shortly before the MMO is due to be permanently closed down. Within the game world the player appears as a king, searching his empty island kingdom for any sign of other players. The game is again controlled by arrow keys and plays similarly to Icarus, with the player moving the king from panel to panel through the different parts of the kingdom. While there are puzzles that can be solved in order to reach the narrative's conclusion, the emphasis in Kingdom is placed more on the act of exploration itself. My intent was to create an explorable space mediated through the format of an audible digital comic.

In *Understanding Comics*, Scott McCloud asserts that "in comics at its best, words and pictures are like partners in a dance" (1993, 156), where each takes turns in leading the narrative. For audible sound to successfully join the multimodality of comics, it too must be given opportunities to lead. In Icarus I had begun by creating the comic and game systems before later beginning work on the soundtrack. In Kingdom, I began the creative process with the sounds themselves. Using the creative commons sound archive Freesound.org, I assembled a library of ambient territory sounds that evoked a range of different environments. From these I teased out an imagined geography in which the sounds could interrelate as part of an adaptive soundscape. Next I drew thumbnails of the landscape in comics form and from this guide created the final artwork, constructing and integrating the modular soundtrack as I progressed.



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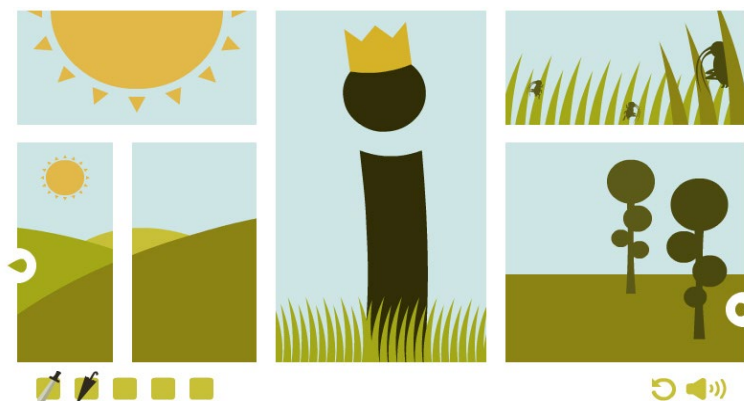


Fig.4. Daniel Merlin Goodbrey, *The Empty Kingdom*, 2003, hypercomic.

Permission granted by the creator.

In a responsive soundtrack, synchronisation between sound and image relies on accurately tracking the progression of the reader through the comic. The ‘fidelity’ of the soundtrack’s response is linked directly to the accuracy with which this progression can be measured. An audible comic that groups panels on digital ‘pages’ has a low fidelity of response, as it can only track the points at which the reader navigates from one page to the next. Changes in the soundtrack are therefore limited to these digital page turns, meaning any loops of sound must match appropriately with all the panels contained on each page. To achieve a higher fidelity of response, the reader can be limited to viewing a single frame of the comic at a time, or forced to click regularly to build up or change the composition of panels on the screen. Changes in the soundtrack can then be synchronised to the appearance of each new panel, allowing for spot sound effects to be used alongside loops of sound tailored more closely to specific image sequences. However, such approaches also place limits on the simultaneous display and juxtaposition of images that several scholars have identified as a key characteristic of the form of comics (cf. McCloud 1993; Groensteen 2013; Miodrag 2013; Goodbrey 2014b).

In *Kingdom*, the comic is divided into fixed, page-like compositions of simultaneously juxtaposed panels. Within these compositions the reader controls the position of the king, moving him from panel to panel using the arrow keys and triggering the transition to a new composition by moving him off the edge of the screen. In this way the king serves as an avatar for the reader within the environment being simulated in the comic and allows for a high degree of precision in the tracking of reader progression. This approach therefore allows for the retention of some traditional concepts of page layout while at the same time allowing for a very high level of fidelity in the responsiveness of the comic’s soundtrack. From the practitioner’s standpoint, it also necessitates a process of careful experimentation in order to successfully determine the variations in volume needed for each sound loop in each panel of the comic.



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Groensteen asserts that in comics, text and image “enter into an intimate, almost fusional relationship” (2013, 71). However, he also cautions that once other elements such as sound are added to into the multimodality of comics, “it becomes much harder to achieve this perfect degree of integration: often, they remain disparate elements, aggregated but not fused, unsystematic” (71). In attempting to understand the fusion of comics and audible sound, it is helpful to consider the concept of “synchresis”, which Chion defines as “the spontaneous and irresistible weld produced between a particular auditory phenomenon and visual phenomenon when they occur at the same time” (1994, 63). As Groensteen asserts, synchresis is problematized in an audible comic due to the conflict between the definite, measurable time of sound and the indefinite, abstract time of comics narration. The use of modular, looping and ambient sound elements in responsive soundtracks are one approach towards successfully achieving synchresis. Loops of audible sound, lacking definite beginnings and endings, can be more easily matched with the indefinite sequences of fictional time created within the panels of the comic.

Kingdom primarily makes use of ambient loops in its responsive soundtrack, but it also contains some spot sounds that play at specific points in the reader’s progression through the comic. To understand the approach I took in integrating these sounds, it is useful to consider Chion’s concept of the “synch point”, which he defines as the “salient moment of an audiovisual sequence during which a sound event and a visual event meet in synchrony” (58). Spot sounds are by their nature relatively short sounds of a definite length, designed to accompany a specific event or action within the narrative. Placing the synch point of a spot sound in an audible comic represents the hardest challenge to achieving synchresis, as it has the most potential to draw attention to the conflict between definite and indefinite time.



Fig.5. Daniel Merlin Goodbrey, *The Empty Kingdom*, 2003, hypercomic. Permission granted by the creator.

In *Kingdom*, my approach was to treat these synch points as occurring in the gutters between panels, rather than in the panels themselves. One example of this is provided by a section of the comic that includes a bird sitting on top of a rock, which flies away as the king approaches it [Fig. 5]. In this sequence the reader first sees the bird perched on the rock. Then, as the reader moves



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the king towards the rock, they hear but do not see the bird take flight. In the next panel the bird is then shown already in full flight away from the rock. Rather than conflict with the still images that make up this sequence, the spot sound is in essence synched with the imagined motion that the reader creates in their mind. This approach plays to the strength of audible sound to suggest unseen movements (Chion 1994, 12), without negating the roll of the reader in mentally constructing the “continuous, unified reality” (McCloud 1993, 67) represented in the panels of the comic.

Conclusion

In this article I have examined the use of sound in audible comics, both as an element of navigation and as an integrated part of a comic’s narrative. The integration of audible elements into the multimodality of comics may include either diegetic or non-diegetic sounds, with the former benefiting from the use of rooting objects to situate them within the diegesis. In audible comics sound may influence the pace of reading and potentially lessen reader control over their progression through the narrative. These issues can be addressed through the use of responsive soundtracks that link control and modification of audible sound directly to reader progression.

In addition to providing a theoretical framework for the study of sound in digital comics, the article has provided a practitioner’s perspective on the challenges of creating audible comics. The modular, looping nature of a responsive soundtrack is sympathetic to the indefinite time of comics’ narration and allows creators to draw tropes from film and videogames in the construction of their soundscapes. The fidelity of response in these soundscapes is determined by the precision with which reader progression can be tracked. A higher fidelity of response can complicate soundtrack creation, but also provides more opportunity for the use of spot sounds alongside looping elements of audio. In placing the synch point for such spot sounds in the gutter between panels, audible sound can support (rather than conflict with) the reader’s role in constructing time and narrative within the multimodality of comics.



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Daniel Merlin Goodbrey

is a lecturer in Narrative & Interaction Design at The University of Hertfordshire. A prolific and innovative comic creator, Goodbrey has gained international recognition as a leading expert in the field of experimental digital comics. His hypercomic work received the International Clickburg Webcomic Award in Holland in 2006 while his work in print was awarded with the Isotope Award for Excellence In Comics in San Francisco in 2005. His smartphone app, A Duck Has An Adventure was shortlisted in the 2012 New Media Writing Prize. An archive of his work can be found at <http://e-merl.com/consulting>.

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Craig Smith, Canterbury Christ Church University

Introduction

The motion comic can be regarded as part of a broader movement, which has placed the comic book medium as one of the most influential narrative sources in popular film and animation. The advent and maturation of Computer Generated Imagery (CGI), Visual Effects (VFX), and sophisticated digital compositing, enables Hollywood filmmakers to create CGI comic book characters that blend almost seamlessly with live-action characters and real or imaginary environments. The twenty first century has witnessed a number of commercially successful film releases such as Spider-Man (Raimi 2002), and the more recent Avengers Assemble (Whedon 2012). Produced and distributed according to the Hollywood system, these 'blockbusters' have arguably created a greater demand for comic book derived narratives across various media platforms, such as film, television, the Internet and digital tablets and smartphones. Marvel's Agents of Shield (2014) and their upcoming Defenders Netflix series exemplify the influence of comic books and media convergence. While the comic book medium has already been adapted into various film franchises, televised cartoons, webcomics and interactive experiences, the emergence of the motion comic has further transformed the relationship between the comic book medium and moving image culture. It does so by directly appropriating the narrative and 'static' comic book artwork from the original source material (the hypotext), which is then manipulated by animation software such as Adobe's After Effects to create an impression that is similar to paper-cut animation. Early examples of the form include the episodic web-based Broken Saints (Burgess and Kirby 2001), as well as Saw: Rebirth (Shuter and Viney 2005), an adaptation from a one-off comic book title that acted as a prequel to the Saw narrative in the live-action films. The release of a motion comic adaptation of Dave Gibbons and Alan Moore's Watchmen (Hughes 2008) on the iTunes store and DVD brought the motion comic field to public attention more than any other title up to that time. By adapting such a high profile graphic novel, it signified that the motion comic had become part of a broader effort to bring the comic book medium into new and emerging forms of digital media. To date, the series has been generally well received, despite some criticisms of the voiceover:

The dialogue, provided entirely by Tom Stechschulte, is really quite good, especially when voicing Dr. Manhattan, though there are a few major exceptions, namely the fact that he also provides the voices for the female characters (dvdtalk.com 2009).

The widespread influence of the motion comic also extends into contemporary transmedia practices, enabling content creators to extend existing franchises beyond their native mediums and distribution networks in a bid to reach a wider spectrum of consumers. Motion comic titles, such



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as the aforementioned SAW: Rebirth enable content producers to augment existing franchises with additional exposition, which often takes the form of a prequel to a popular film or television series. Furthermore, the accessibility of digital animation software has encouraged a growing number of amateur or 'fan-made' motion comics of popular titles. Recent adaptations include The Death of Spiderman (Bates 2011), which has achieved over 1,000,000 views on YouTube, and Angry Birds: The Motion Comic (Kareranta 2011), which has achieved over 800,000 views on YouTube. These figures indicate a growing acceptance of the field as a conduit for fan participation and remediation.

As with many new forms of moving image or digital culture, motion comics currently polarise opinion among comic book readers, animation critics, audiences and the popular press, as illustrated by some of the following comments and reviews:

I'm with you, dude. I'm an old comic book geek from way back and I think that "digital" or motion comics are for gomers. Gimme an old fashioned physical comic any day. Nothin' like crackin' open an old issue and smelling that aged newsprint!! Yeeeeaaaaaah..... (FatFreddysCat 2012)

With Marvel Comics' new Stephen King's N joining DC's Watchmen and Image's Invincible series for MTV, everyone seems to be jumping on the animated adaptation bandwagon. We have only one question to ask: Has no-one told any of these people that these cut-price cartoons kind of suck? (McMillan 2008)

The previous statements, and many other online comments and discussions, obscure the motion comic field within a subjective area of public discourse. Many such comic book readers exhibit a fear or distrust of digital media and what it possibly means for the printed comic book medium. One could argue that their concerns are the equivalent of a rallying cry from a distinct subculture of comic book fans that oppose contemporary digital modes of comic book narrative and entertainment. Their devotion to the analogue printed comic book medium lies in direct conflict with the commonly held perception of convergence culture, as posited by Henry Jenkins:

By convergence, I mean the flow of content across multiple media platforms, the cooperation between multiple media industries, and the migratory behaviour of media audiences who will go almost anywhere in search of the kinds of entertainment experiences they want (Jenkins 2006, 2).



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This article argues that the motion comic is part of a strategy to cross-pollinate new and existing comic book content with moving image culture via screen-based devices and digital distribution channels such as iTunes, YouTube and mobile apps. The following section will consider the various forms of motion comic by analysing the distinct production practices that motion comic directors employ to adapt a comic book scene into a motion comic.

Motion Comic Aesthetics

A motion comic appropriates original comic book narrative and artwork as the primary source of visual material for its creation. The unique hand-drawn artwork of the comic book artist is typically scanned and converted into a digital image format. The artwork from each panel is often separated into distinct visual layers, which can be animated separately from one another to give an impression of speed/time, camera movement and spatial depth. A variable combination of comic book speech balloons, narrated voiceover, individual character voiceover and soundtrack score typically accompany the moving image.

Comic book panels

The narrative flow of the comic book occurs within an overall system of panels, individual panels that depict scenes, and the artwork within those panels. This system is designed to aid the sequential flow of the narrative. Motion comics adapt this visual layout into a screen-based format, which is typically landscape in aspect ratio, compared to the portrait aspect ratio of the comic book. This adaptation appears as part of a time-based moving image. This can occur in the following ways within a screen-based image:



Fig.1. Motion comic definitions - comic book panels.



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Motion

There are three distinct aspects of animated motion within the field of motion comics.

These include: Separate layers of individually animated characters or objects within the screen-based image, static characters and backgrounds with animated effects, a roving camera which pans or zooms around the panel/panels, or a combination of these approaches.



Fig.2. Motion comic definitions – motion.

Audio/Literary elements

The comic book can be regarded as a visual system that combines both word and image.

Motion comic adaptations can combine the visual aspects of the speech balloon within the moving image, or replace the written dialogue with character voiceovers and combine a soundtrack score.

Once again, a combination of these particular scenarios is possible within the motion comic.

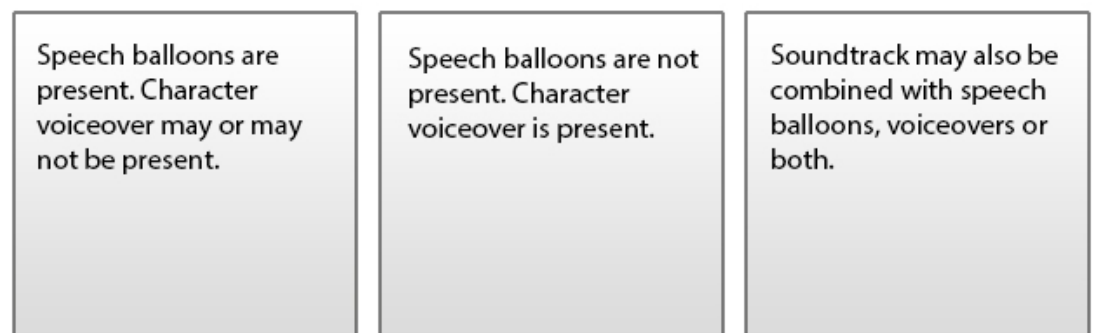


Fig.3. Motion comic definitions – audio/literary elements.



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Narrative fidelity

The motion comic may replicate the original narrative of a comic book story in its entirety.

Other examples adapt the comic book narrative to create an abridged version, or the story may be created from an original script for the specific purposes of using the medium of motion comics as a marketing tool that draws attention to a new television series, videogame or film tie-in.

<p>Story is replicated 100% from original comic book material. Each comic book panel has a corresponding motion comic scene.</p>	<p>Story is abridged. Sections of the original comic book may be omitted from the motion comic adaptation.</p>	<p>The story is created solely for the purposes of creating a motion comic. e.g. advertising a new film, videogame or television series.</p>
--	--	--

Fig.4. Motion comic definitions – narrative fidelity.

Spatial depth

Motion comics often display a heightened sense of spatial depth compared to the original comic book artwork. This is accomplished via software such as After Effects, which enables the animator to composite different layers of visual information at different distances from a virtual camera.

<p>Depth of field is created via separate visual layers and virtual camera, creating a sense of an artificial world.</p>	<p>Layers are not separated, depth of field is not present and artwork remains 'flat' or 2-dimensional.</p>	<p>A moving camera, with special effects and artificial blurs give a partial sense of depth.</p>
--	---	--

Fig.5. Motion comic definitions – spatial depth.



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Adaptation

Motion comics display various approaches to the challenge of adapting static comic book artwork into a digital moving image format. The majority of motion comic adaptations favour a cinematic approach that effectively discards many aspects of the comic book language, such as panels and gutters, for a moving image format that attempts to emulate orthodox animation or film.

Other motion comic examples favour retaining many aspects of the comic book language, such as speech balloons or acknowledging the presence of multiple comic book panels within the screen-based format. Finally, more experimental interactive approaches exhibit comic book artwork within an interactive digital narrative.

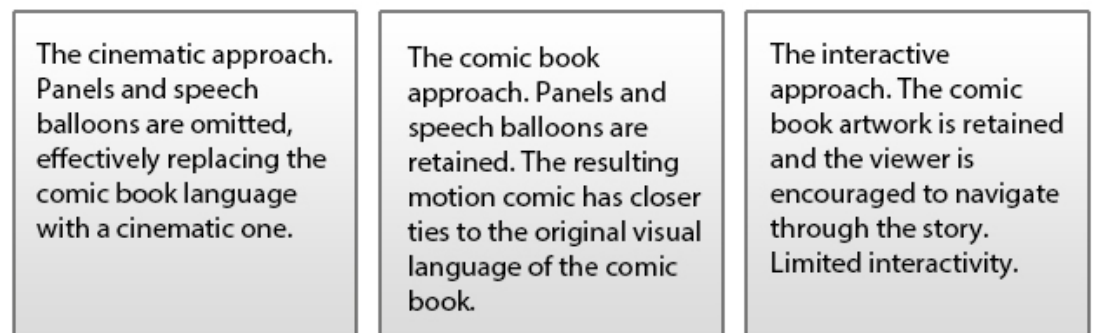


Fig.6. Motion comic definitions – adaptation.

Genres

The dominance of the superhero genre in the U.S. has arguably clouded perceptions of the comic book medium over the years. The motion comic shares this particular genre affiliation, as Marvel and other publishers in the U.S are currently the dominant players in its recent emergence.

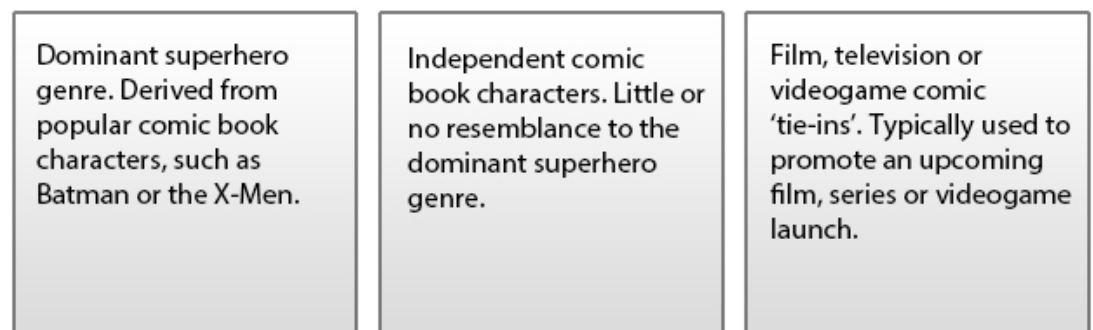


Fig.7. Motion comic definitions – genres.



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Distribution and formats

The motion comic exemplifies the new forms of digital distribution that have become almost ubiquitous in the developed world in recent years. Content can be downloaded to personal computers and mobile devices, or streamed over the Internet. More established forms of distribution, such as the DVD, are also used to provide a 'real-life' artefact that the motion comic spectator can view in the comfort of their living room. The digital nature of the motion comic also revolutionises the way in which comic book narratives are accessed and 'collected' by readers/viewers.

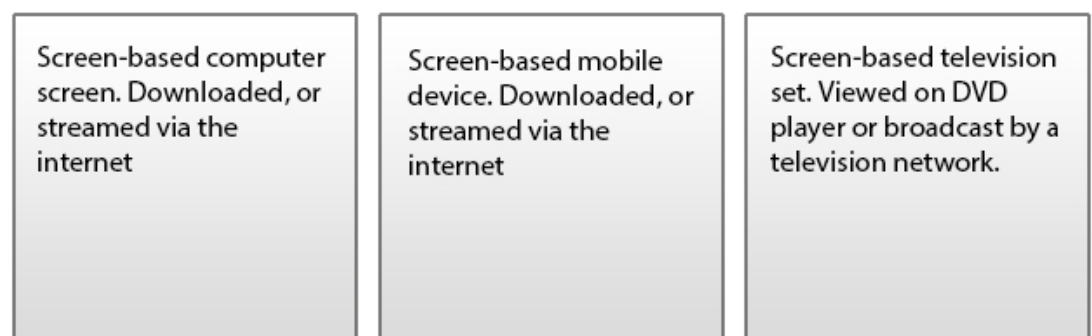


Fig.8. Motion comic definitions – distribution and formats.

This section has demonstrated that the medium of motion comics exhibits a variety of comic book, film and animated forms of visual, textual and auditory narrative, in proportions that vary from project to project and production house to individual. It has also noted the various genres and modes of distribution that currently dominate the medium. Fortunately, through these diverse and sometimes conflicting schemata, there does appear to be one common factor that spans across the multitude of styles and genres; namely the appropriation of an existing static artwork that can be placed within digital animation software. This is in stark contrast to conventional animation practices, which typically render new character poses frame-by-frame and do not venerate a static drawing. The field of 'motion graphics' shares a similar approach to the manipulation of static typography, design and imagery. There may be some instances in a motion comic production where frame-by-frame animation is used, however the status of the static comic book image takes precedence. Therefore this article defines the medium of motion comics as:

The appropriation of static comic book or illustrated artwork that is situated within the temporal form of an animated film or digital environment (Smith 2013). ¹



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The transferral of visual narrative from one medium to another is a challenging one particularly when moving from a printed medium into a screen-based environment, which has different aspect ratios and physical dimensions. The following diagram illustrates the various approaches to motion comic production.

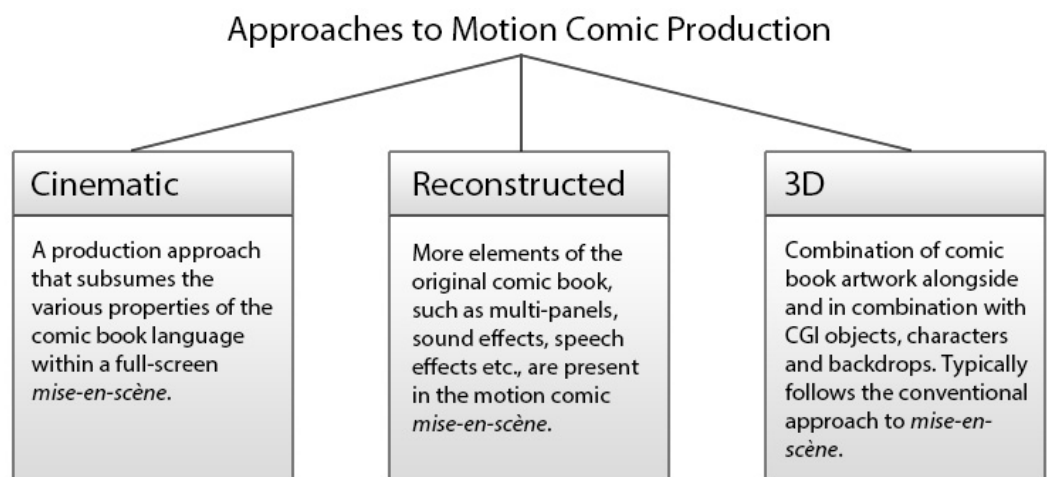


Fig.9. Approaches to motion comic production.

The following section will provide a brief case study of the Watchmen motion comic, in order to reveal some of the cinematic techniques employed to create the series.

Watchmen Case Study

Watchmen motion comic director Jake S. Hughes began his career in videogame development and slowly developed an interest in After Effects to construct opening titles for videogames such as Tomb Raider Legend. His work on the motion comic series of Watchmen, exemplifies the cinematic approach to motion comic production. The comic book panels become subsumed within a screen-based *mise en scène* that attempts to convey the narrative through cinematic techniques, such as tracking, panning, zooming, pull focus and a range of editing techniques. Page 19 of Chapter seven in the comic book reveals Dan Dreiberg (Nite Owl) in his basement workshop. He has awoken from an apocalyptic nightmare and has placed his night vision glasses on his head, which reveal his flying craft. Laurie Juspechzyk (Silk Spectre) joins him, sensing his unease. Dan's detachment and feelings of impotence threaten to overwhelm him and he half-heartedly suggests taking his ship out into the night to, "get myself straight". Laurie encourages Dan, and he dons his Nite Owl costume. The chapter eventually culminates in Dan and Laurie consummating their relationship, which had previously faltered in light of Dan's anxiety and self-doubt.



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The resulting motion comic adaptation alters this initial scene by employing cinematic effects to isolate Dan, thereby heightening the sense of his detachment and anxiety. Dan places his Nite Owl goggles on his head. The image is somewhat cropped compared to the original comic book panel. His ship is revealed in the gloom of the basement and the camera tracks across the scene in an attempt to mimic Dan's head movement. Director Jake S. Hughes ignores Laurie's gradual descent into the basement, opting to introduce her from a darkened doorway instead. Her blurred image is visible behind that of the dejected figure of Dan. The camera slowly tracks across as Dan relays his feelings of being powerless. Hughes alters our perception of spatial depth (and the static comic book image), by employing this particular form of camera movement and depth of field. The camera eventually stops to reveal a composition that matches closely with that of the final image panel on page 19. Pull focus is employed later on to draw our attention to Laurie's suggestion to take the ship out for a flight.

While the adaptation utilises voiceover as well as speech balloons (a trait of the 'reconstructed' motion comic), the dominance of the full screen mise en scène arguably places Watchmen in the 'cinematic' trope of motion comic production. The separation of comic book artwork into distinct visual layers enables directors such as Hughes to use camera techniques such as tracking shots, zooms and even pull focus, to change our relationship with the original comic book material. These techniques, combined with some editing techniques and abridged scenes, effectively provide sufficient visual stimuli for the motion comic viewer, particularly in scenes where there is little motion. The viewer cannot dictate the pace as they would when reading a comic book. The following section will examine emerging forms of comic book narrative, that also involve motion but are clearly influenced by new media, the internet, and non-linear storytelling.

Interactive Multi-Branching Digital Comics – The Hypercomic

"A hypercomic can be thought of as a webcomic with a multi-cursal narrative structure. In a hypercomic the choices made by the reader may influence the sequence of events, the outcome of events or the point of view through which events are seen... it's that element of reader choice and interaction that makes a hypercomic a hypercomic."
(Paulgravett.com 2010)

Digital media offers other ways to integrate motion within comics using interactivity as a means to introduce zooms, pans and panels over time. The emergence of digital forms of narrative, which exhibit various forms of hyperlinks or ways to navigate information via mouse or touch response, enables a form of limited viewer control. The interactive digital comic, or hypercomic, facilitates



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a range of control and narrative complexity that would be difficult to achieve via traditional forms of media. The term hypercomic, can be associated with hypertext or hypermedia, which will be investigated further in this article.

Daniel Merlin Goodbrey is a new media artist, lecturer and comic creator who has created a number of hypercomics, which can be navigated in various ways. Goodbrey and Tom Gauld's interactive narrative Pocom (2003) is an exemplar of not only a multi-panel, multi-branching comic strip, it also exhibits a strong sense of spatiality through the manner in which the viewer can access and control the flow of the story. Unlike many other multi-branching interactive experiences, Pocom allows the viewer to interact with different narrative strands while retaining a sense of location amidst a large-scale spatial structure or map. Pocom's interface enables a form of motion via a zoom effect as the viewer clicks on different areas of the map. By creating a central horizontal narrative 'spine', Gauld and Goodbrey's spatial map aids the reader in navigating the dozens of pathways that branch off at regular intervals from the main story. Goodbrey argues that the seeming complexity of the various pathways have been effectively contained within Pocom's binding spatial structure, enabling the reader to retain an overall sense of narrative meaning:

"In terms of demonstrating the potential of hypercomics, that piece is always the one that shows how complex it can be without becoming lost in the narrative. That's part of the strength of making hypercomics that way. You're creating a branching piece but you're keeping that physical relationship between all the parts so it's like Groensteen's comics as network or structure." (Goodbrey 2012)

Pocom exhibits a narrative and visual system that is reminiscent of Thierry Groensteen's work in *The System of Comics* (2007), whereby the overall system or structure of a comic book narrative is as important as each individual panel. As the user clicks on the opening panel, a navigational map of the entire story structure appears. Although this schematic is too small to decipher any real meaning contained in each panel, the viewer instantly recognises the scale and scope of the interactive piece they are about to engage with. It could be argued that Gauld and Goodbrey's creation essentially provides a visual introduction into a complex multi-branching narrative, forming a type of navigational chart to aid and prepare the viewer on their journey through the narrative.



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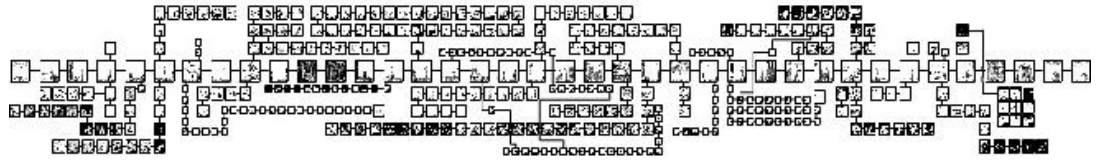


Fig.10. Tom Gauld and Daniel Goodbrey, *Pocom*, 2003, hypercomic. Permission granted by the creator.

The protagonist's journey begins on the right-hand side of the screen. By clicking on the individual panels, the equivalent of a rapid camera zoom takes the viewer into the map and onto a specific panel. To zoom out of the close-up panel shot, the viewer simply clicks on the white space between each panel. Once the viewer has familiarised themselves with the navigational elements of the map, the reading process becomes a simple matter of clicking on the next sequential panel, or divergent path in the narrative. This process differs from reading a comic book in a number of ways. Firstly, comic book readers cannot normally view a map of the entire narrative structure of a comic book in a single image. Secondly, comic book pages typically contain a number of panels, without an emphasis on one in particular (unless the writer/artist decides to enlarge or draw attention to one specific panel). Finally, comics are traditionally consumed in a linear page order, whereas *Pocom* exhibits a number of separate narrative strands that can be explored by the viewer.

The following analysis of the *PoCom-UK-001* hypercomic, highlights some of the features and micro-narratives contained within it.

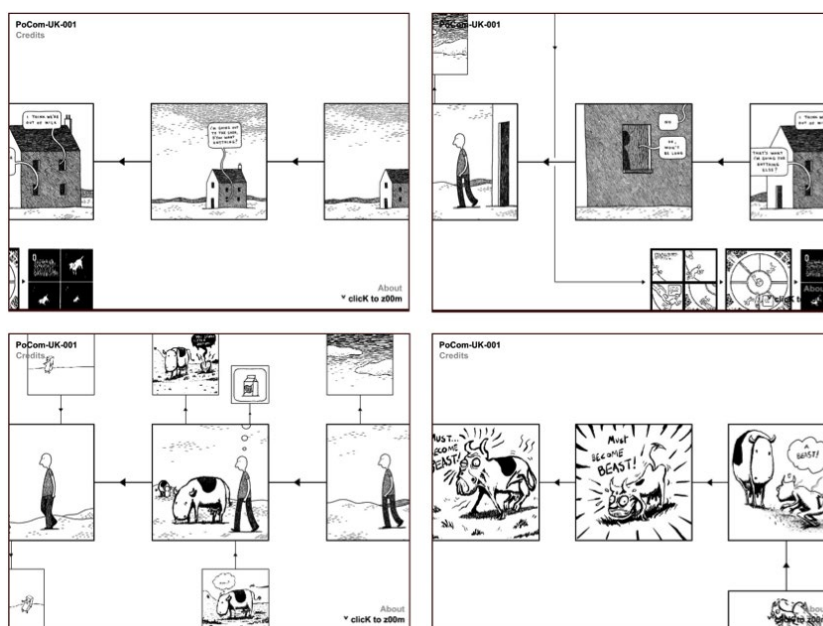


Fig.11. Tom Gauld and Daniel Goodbrey, *Pocom*, 2003, hypercomic. Permission granted by the creator.



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The protagonist announces that he is “going out to the shops”. By clicking on other panels, the scene/camera shifts to that panel, aligning it in a central position on the computer screen. The central character’s journey begins on the right-hand side of the map (see above). Other micro-narratives can be accessed via panels that are either above or below this horizontal linear narrative. One of these micro-narratives involves a small demon that has been instructed by the devil to change into a beast and kill the first person it sees. Goodbrey has also released the Tarquin Engine, which enables comic book artists to use this particular mode of interactive storytelling via software. An excerpt from the Webcomics Nation website describes it as:

a tool for the creation and delivery of zooming infinite canvas webcomics. In its current form it exists as a series of Action Script routines within a Macromedia Flash FLA file. Users can customise this template file through a simple drag-and-drop process in order to create their own original infinite canvas narrative (Goodbrey 2005).

The navigational flexibility of the Tarquin Engine facilitates the flow of numerous sub-narratives and divergent narrative pathways. By utilising the spatial qualities of a pictorial map, Pocom’s hyperfiction, or multi-linear, narratives partially mirror some of the aesthetics of multi-panel comic book layouts. Where they inevitably differ however, are the choices and manner whereby the viewer can access or control the flow of the narrative elements; as suggested by the following statement by Goodbrey:

Having come from a background in hyperfiction, I’ve always been very comfortable with writing work in little ‘packets’ of narrative. So they can be experienced in lots of different ways and the reader can reassemble it themselves. I find it a much more natural way of writing than writing a fixed narrative because it means I can concentrate on smaller moments and let the reader assemble them. (Goodbrey 2012)

It should be noted that there are many other ways to control the flow of information and navigation within a digitally constructed narrative, some of which will be examined in the next section. Advancements in digital interactive culture have resulted in different forms of interactive content, representation and user control. The following section will examine the emerging field of interactive motion comics, with a case study of CIA: Operation Ajax (Burwen 2011).



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Interactive Motion Comics

Initial research into the area of the interactive motion comic has revealed areas of crossover between the more established forms of webcomic production, animation and the recent emergence of the interactive digital 'e-book'. The growing popularity of mobile platforms such as smartphones, and digital tablets such as the iPad, has encouraged a degree of experimentation toward the production of interactive narratives in recent years. These 'touch-based' devices enable audiences to interact with narratives in new and innovative ways, including; touching the screen to interact with a character or user menu, touching and dragging elements to interact with other digital elements, tilting the device to initiate a response, shaking the device to interact with a digital element, 'pinching' areas of the screen to magnify or zoom out.

Subsequently, it is important to consider a definition of what constitutes an interactive motion comic, before a greater analysis of this sub-genre can be realised. Our existing definition is suitable for motion comics which can be distributed and presented in a conventional moving image format. These motion comics can therefore be displayed on both 'older' forms of media such as television, as well as the emerging forms of new media such as computer monitors, smartphones and digital tablets. However, the introduction of digital interactivity forces us to reconsider the definition of the emerging field of interactive motion comics with the following: An interactive motion comic appropriates static comic book artwork and situates it within a user-controlled digital environment; motion is present in either navigational transitions or as specific moments of moving image that complement the static interactive elements. Both of the definitions rely upon the appropriation of static comic book artwork, however the production of an interactive motion comic differs from conventional forms of motion comics by adding additional modes of control-based interaction to further the narrative.

This article also argues that interactive motion comics can be differentiated from interactive webcomics through their supplemental instances of moving image, but clearly there are areas of overlap and hybrid forms that may pose problems for such clearly defined models. The term 'interactive motion comic' is not commonly found on the Internet or other digital platforms, however this article argues that the genre can and does exist. Research has uncovered examples where the authors of certain webcomics are now using the term 'interactive motion comics', in an attempt to distinguish their work from more conventional forms of comic book narrative on the Internet and to position themselves within an emerging field.² The following section will further illuminate the area of interactive motion comics via a brief analysis of CIA: Operation Ajax.



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CIA: OPERATION AJAX

CIA: Operation Ajax departs from many motion comic productions in the sense that it is currently only available as an iPad app. It incorporates comic book artwork, authentic declassified documents, character dossiers, historical photos, and news reels from the era into an interactive narrative that depicts the complex and ‘true-to-life’ events which led to the democratically elected Prime Minister of Iran, Mohammad Mosaddegh, being overthrown in 1953. The involvement of the United States and Britain, and in particular the role of the CIA in orchestrating the coup d’état, arguably led to years of anti-Western sentiment in the region which still reverberates today. Historical accuracy was of paramount concern for Daniel Burwen, Creative Director and founder of Cognito Comics, as indicated by their collaboration with writer Stephen Kinzer:

I was very lucky to have Stephen Kinzer join our team as editor from the outset, and he really helped guide us throughout the project, helping Mike and I vet every decision to find a balance between telling an engaging story while still keeping things historically accurate (NIACouncil.org 2012).

While other motion comic directors refer to the original hypertext of a comic book, and the resulting attempts to create an authentic adaptation into the moving image, Burwen’s main concern seems to be directed towards the historical accuracy of Mosaddegh’s downfall in 1953. However, it should be noted that Kinzer’s role also included approving the comic book artwork for historical accuracy. Burwen also reveals a desire to embrace new digital technologies and platforms, which further augment the narrative with a combination of different auditory and visual forms:

*Ajax started as a traditional print comic book. In early 2010, we had just finished the script and were gearing up for art production when the iPad was announced...
...I didn’t realize just how powerful the iPad would be as a platform, being able to blend together games, comics, and film into new storytelling experiences (Donahoo 2011).*

This article argues that new media and emerging digital devices and platforms, such as the iPad and Apple store, are altering the production methods and practices of media creators. CIA: Operation Ajax illustrates many of the benefits of this approach in enriching a narrative with additional literary, audio and moving image components. The application creates a multi-layered user-experience that enables the reader to drive the narrative forward at their own pace, via simple touch and swipe gestures on the surface of the screen. This form of touch control is more akin to the reading of a book or graphic novel, whereby the reader engages with the object as it rests in



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their hands. The opening page demonstrates the range of navigational controls available to the reader. Tap, or 'swipe' controls are central to the reading experience. A 'star' icon indicates additional content, such as television newsreel footage.

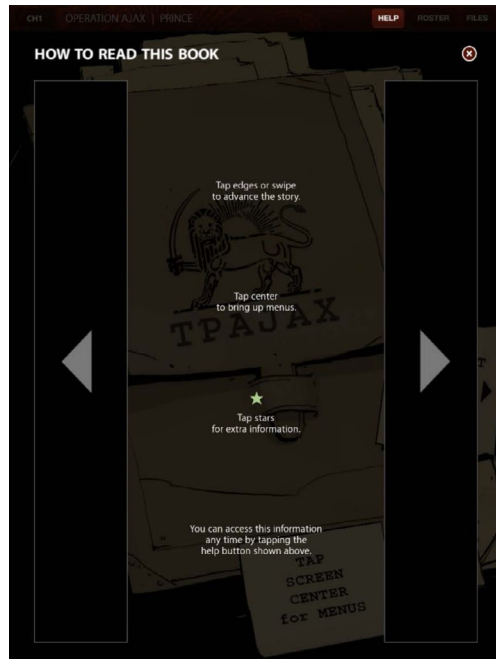


Fig.12. Help screen from Burwen, Daniel, CIA: Operation Ajax, 2011, interactive motion comic. Permission granted by the creator.

In addition to these fundamental navigation controls, the following analysis of a scene at the start of CIA: Operation Ajax reveals a number of character, panel and aesthetic display traits that were used to emphasise motion and the passage of time. CIA: Operation Ajax uses several elements from the 'reconstructed' motion comic aesthetic. New panels typically move in from right to left on the screen. Additional panels often build a more familiar full-page spread that resembles many comic book layouts. Characters are typically separated from the backdrops to allow for additional motion. The running figures scale down and move from left to right. The pavement and wall backdrop moves at a different speed from the running men to create a form of parallax movement. Existing panels fade in opacity against the black background, emphasising the current panel in the sequence.



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Fig.13. Burwen, Daniel, *CIA: Operation Ajax*, 2011, interactive motion comic.
Permission granted by the creator.

The range of motion is quite rudimentary in comparison with 'traditional' forms of motion comic, such as *Watchmen*, however there are several technical and memory-based restrictions that have to be taken into consideration for an app-based title. Similarly, the full page spread in [Fig. 14] reveals a score of individual elements that scroll and move independently of each other as the page opens. This creates the sense of a moving diorama that imbues the scene with movement as well as spatial depth. In the following scene, the men escape the crowd and enter a deserted alleyway. The previous crowd scene dims during a transition and the lead character appears to move forward. The men move vertically down the screen, without limb articulation.



Fig.14. Burwen, Daniel, *CIA: Operation Ajax*, 2011, interactive motion comic.
Permission granted by the creator.



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CIA: Operation Ajax rarely employs character motion, however the transitional sequences between panels and the illusion of depth through the manipulation of layers and parallax scrolling are highly effective in creating a sense of movement beyond the conventional limitations of two dimensional artwork.

The following analysis of a chapter introduction within the story reveals the extent to which image manipulation and the separation of image assets into different layers informs much of the aesthetic approach to animation within CIA: Operation Ajax. The introductory page to Chapter 4 reveals a number of press photographers in front of President Truman and Iranian Prime Minister Mossadegh. Their flashbulbs create harsh intermittent white flashes, which provide a framework for the transition of additional images. At the end of this sequence the figures of Truman and Mossadegh stand side-by-side, with a further backdrop of Iranian and United States flags, newspapers and Time magazine. A third sequence at the start of this chapter removes the textural detail of the press photographers and replaces them with a black silhouette.



Fig.15. Burwen, Daniel, CIA: Operation Ajax, 2011, interactive motion comic.

Permission granted by the creator.

Additional textual information appears to provide further exposition of a key political figure. Additional video elements and 'dossiers', further enrich CIA:Operation Ajax adding to the historical authenticity and nature of the App.



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Conclusion

This article is a response to the need for an in-depth study of the field of motion comics, a field that has largely been ignored in academic circles to date. This dearth of informed research and debate has created a vacuum whereby the motion comic is critiqued by popular journalists, comic book readers and animation viewers, who have particular affinities with certain tropes of comic book and animation practice and whose enthusiasms are not always compatible with objective analysis. This article does not necessarily defend the motion comic from such criticisms; instead, it serves to illuminate through scholarship many of the characteristic properties of an emerging field of animation practice which has the potential for further innovation and development.

The influence of technology on the emergence of the motion comic is also considered. As digital media brings about new opportunities and challenges for comic book publishers, motion comics can be regarded as one of several attempts to bring comic book narratives to a new consumer demographic. This demographic does not hold on to the value of the printed comic book with much reverence or nostalgia for the past, and instead looks to new forms of digital media for its entertainment. Both Pocom and CIA: Operation Ajax, point to the growing interplay and convergence between comics, animation, and interactive media in general. The relevance of motion comic processes, adaptation and visual aesthetics plays a pivotal role in the emergence of new forms of interactive comic book material. The recent emergence of app-based comic publishers Madefire also suggests the influence of motion comic aesthetics through their use of limited motion and spatial depth.

This expansion into new and diverse areas of comic book narratives suggests that the motion comic aesthetic is one that is well suited to the adaptation and remediation of comic book narratives. However, this very evolution of the form may result in motion comics becoming subsumed within new and emerging digital practice. Indeed, this paper may represent a transitory moment in the ongoing evolution of the comic book form. A moment where the motion comic aesthetic has been explored by numerous comic book publishers and independent producers to propel their comic book narratives into different time-based and interactive mediums. It is hoped that others will support, contest, and build upon this research in the future.



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Footnotes

- [1] It should be noted that there are examples of motion comics that are not adapted from existing comic books. As a result, a number of static illustrations/artworks have to be created before the animation process can begin.
- [2] Submarinechannel.com published interactive animation series The Killer in 2001. The website recently stated “With misty-eyed nostalgia we sometimes look back at one of the (if not the) first interactive motion comics ever made, The Killer” (2014).



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Craig Smith, 'Motion Comics'
Writing Visual Culture 7 (2015)



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James Taylor, University of Warwick

Introduction

Superheroes rarely age and yet are constantly adapting to the demands of new media. Studying the movements of the superhero from comic books into digital media can enable us to interrogate relations between the formal properties of these mediums. The Kick-Ass comic book (Millar, Romita Jr. and Palmer 2010) and film adaptation (2010) are ideal texts through which this can be explored. In following the attempts of a teenager to recreate the kinds of superheroic feats found in comic books through the aid of social media and digital technologies, these texts explicitly consider the compatibility of popular comic book narratives and digital media. The self-reflexive nature of the texts comments on form as well as content, with both providing representations of different media that outline formal similarities and distinctions between mediums.

Formal interactions between different mediums are illuminated by Jay David Bolter and Richard Grusin's (2000) concept of "remediation", which will be outlined prior to my analysis of Kick-Ass. I will then discuss stylistic devices in the Kick-Ass comic book that represent different forms of media, and analyse comparable sequences in the film. This will enable exploration of what the texts themselves suggest to be the relations between the formal properties of, and experiences offered by, comics books in their traditional print form and digital media. While 'digital media' encompasses a broad range of objects and practices, the main forms evident in the diegesis of both versions of Kick-Ass, and to which this article primarily refers, are social media and digital distribution services available on the World Wide Web. The Web is a key platform through which digital comics are currently accessed, so analysis of ways in which the forms it enables relate to comics will further an understanding of the potential for comics to utilise digital formats. Other types of digital media that will be discussed are videogames, digital surveillance technologies and digital production techniques, particularly in regard to film.

I will finish by demonstrating how, in the film adaptation of Kick-Ass, the protagonist becomes a superhero through his use of digital media. This implies that the kinds of spatial and temporal mastery offered by comics and digital media are comparable to the abilities wielded by superheroes, which enable even the ones without superpowers to transcend restrictions placed on movement by the laws of physics, laws of man or social conventions. To provide the foundations for this analysis I will first establish that spatio-temporal freedoms have been exhibited by superheroes and enabled by their utilisation of media, decades prior to the invention of digital technology.

James Taylor, 'Kick-Ass Version 2.0'
Writing Visual Culture 7 (2015)



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Superman and His Media

From their conception superheroes have broken physical laws and traversed different mediums. Action Comics #1 (Siegel and Shuster 1938), widely considered the birth of the superhero genre, introduced the world to Superman, whose ability to leap an eighth of a mile allowed him to traverse great distances. His leaps turned to full flight as he soared from comic books to radio, cartoons, film serials and television. This flight soon allowed him to not only freely traverse space, but usurp temporal linearity when, in Golden Age comics, he developed the ability to fly through the time barrier. Superman's temporal mastery is cemented in cultural memory by the finale to Superman: The Movie (1978), in which he flies so fast around the earth that he causes it to rotate backward, which reverses the flow of time.

Superman's spatio-temporal liberation is rearticulated in hundreds of other superheroes, from Spider-Man swinging between skyscrapers to the X-Men's repeated encounters with their future counterparts. These fantastic excursions act as potent metaphors for the freedoms enabled by modernity. "Faster than a speeding bullet! More powerful than a locomotive! Able to leap tall buildings in a single bound!" This familiar line, first used in the Fleischer Studios Superman cartoons (1941-1942), pits Superman against other wonders of modernity. The juxtaposition reveals that Superman represents man's ability to move ever faster, build ever higher. It is highly appropriate that the advances in the printing press that allowed comic books, and thereby superheroes, to proliferate, were also utilised by Superman's alter ego, Clark Kent. From his early days Clark utilised his role as a journalist to locate criminals for Superman to defeat, with print media often being a central arena in the fight for truth and justice. For instance, in a story titled "Campaign Against the Planet" from Superman #5 (Siegel and Shuster 1940) a corrupt politician gains control over an influential newspaper, the Morning Pictorial, and uses it to run smear campaigns against honest politicians and police. Clark counteracts by publishing an article in the Daily Planet that reveals the truth, leading to war between the two newspapers in which thugs attack Daily Planet delivery trucks. Upon halting the flow of false information by destroying the Morning Pictorial's delivery trucks and exposing the corrupt politician, Superman eradicates dishonest media.

It is therefore evident that, while representing the freedoms enabled by technological evolution, superheroes also employ media in their fight against evil. In Golden Age Superman comics the newspaper was the best form of media for quickly disseminating messages throughout society, but superheroes in the twenty-first century can utilise a diverse range of digital media. While this new media landscape may be different from that which superheroes originally inhabited, Bolter and Grusin's concept of remediation demonstrates that its mechanisms are rooted in the media by which it was prefigured.



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Remediation

Remediation is a process whereby mediums develop through borrowing from and refashioning one another. Due to these ongoing interactions, Bolter and Grusin posit that “no medium, it seems, can now function independently and establish its own separate and purified space of cultural meaning” (2000, 55). This indicates a shared space inhabited by different mediums in which they are constantly engaged in reciprocal borrowings. However, this space is not one in which mediums simply flow seamlessly into one another; it is governed by the “double logic of remediation” (2). The two logics are “immediacy”, which is the desire to erase all traces of mediation and experience media as if it were reality, and “hypermediacy”, which delights in the multiplication of media. Bolter and Grusin elucidate:

If the logic of immediacy leads one either to erase or to render automatic the act of representation, the logic of hypermediacy acknowledges multiple acts of representation and makes them visible. Where immediacy suggests a unified visual space, contemporary hypermediacy offers a heterogeneous space, in which representation is conceived of not as a window on to the world, but rather as ‘windowed’ itself – with windows that open on to other representations or other media (33-34).

Describing hypermediacy as windowed alludes to the windowed design of popular computer operating systems. Indeed, Bolter and Grusin state that “the practice of hypermediacy is most evident in the heterogeneous ‘windowed style’ of World Wide Web pages” (31). However, they also trace the style back to artefacts such as medieval illuminated manuscripts (34). This parallels Scott McCloud’s demonstration that the formal traits he attributes to comics were evident centuries before the invention of the printing press, offering the Bayeux Tapestry as an example of medieval comic (1994, 12-13). The presence of text alongside images on medieval manuscripts and the Bayeux Tapestry situates them both as examples of hypermediacy, as they each deploy multiple representational forms in discrete units. This comparison reveals that another prime example of a medium that operates through the logic of hypermediacy is comics.

The formal relation between comics and a computer’s graphical user interface (GUI) is further demonstrated by the fact that McCloud’s definition of comics as “juxtaposed pictorial and other images in deliberate sequence, intended to convey information and/or to produce an aesthetic response in the viewer” (1994, 9), describes many features of a GUI. Both comics and GUIs arrange different representational forms, primarily discrete units of image and text, spatially. Comics and GUIs offer ‘panelled’ and ‘windowed’ experiences, respectively.



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Comics and digital media also reciprocally remediate each other. For instance, while many comics artists now use digital software at various, if not all, stages in their work, digital interfaces remediate representational forms associated with comics. Bolter and Grusin cite the use of speech balloons (a representational unit combining text and image that is culturally associated with comics) in visual Multiuser Dungeons (virtual spaces in which networked computer users communicate to create a narrative) as a remediation of comics (2000, 262). In recent years the deployment of speech balloons in digital media has gained greater prominence, with them becoming the standardised form in which text messages are displayed on smartphones. Meanwhile, the kinds of abbreviations and phonetic spellings found in text messages reflect the phonetic language associated with comics, while the integration of emoticons into text messages recalls how speech balloons in comics can contain images.

In one form of hypermediacy on a GUI, “different programs, representing different media, can appear in each window” (Bolter and Grusin 2000, 47). Comics can function comparably, constructing panels to represent different media. For instance, from the Golden Age, Superman comics have featured panels taken up by newspapers with headlines conveying important narrative information. Elsewhere, *The Dark Knight Returns* (Miller and Janson 2002) deploys panels shaped like analogue television screens, complete with rounded edges, while *Watchmen* (Moore and Gibbons 1987) presents excerpts from books published within the diegesis. Like GUIs, the hypermediated nature of comics makes them well equipped to represent other media.

It should be noted that comics and digital media can oscillate between hypermediacy and immediacy, between providing windows to a range of different forms and then erasing the frames.

For instance, an image in a comic can take up a whole page or double-page spread, thereby offering no other panels to compete for the reader's attention. Similarly, a user of a computer can expand a window so that it takes up the full screen. The double logic of remediation, embedded in the construction and experience of comics and GUIs, is represented in the comic book and film of *Kick-Ass* and, through this, formal relations between comics and digital media are illuminated.

Windowed Panels

The first panel of *Kick-Ass* depicts the figure of the superhero at an intersection between different mediums. Though presented in a comic, the captioned narration states “all those comic book movies and television shows, you'd think at least one eccentric loner would have stitched himself a costume” (Millar, Romita Jr. and Palmer 2010), thereby tracking the movements of superheroes from comic books to film and television, while the rectangular panel recalls a widescreen cinematic frame. A costumed man stands atop a skyscraper, silhouetted against a city skyline, the sunrise exuding



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adventure and romance in this heroic cliché. When the figure falls to his death in the proceeding panels, in a failed attempt at flight, the comic announces its desire to interrogate superhero conventions. Characters in Kick-Ass need more than just the iconography of a superhero. They must utilise media to gain spatio-temporal freedoms and have their roles as superheroes socially ascribed.

The properties of such media are demonstrated in the comic's construction, which is rife with remediations that juxtapose the spatio-temporal functions of different media against one another. In the opening panel the captioned narration is in the past tense. This continues throughout the comic, with the protagonist, Dave Lizewski, recounting the events depicted in the images from an unspecified moment. However, although the text and images occupy different moments, spatially they are presented together, on the same page. This recalls McCloud's assertion that "in the world of comics, time and space are one and the same" (1994, 100), evidenced through the fact that time can unfold within individual panels and across sequences of panels. While different panels displayed on the same page can represent different moments, the past tense narration in Kick-Ass demonstrates that different units of text and image within a panel can also represent different moments.

The ability for comics to depict different moments simultaneously through spatial arrangement of representational forms enables them to represent the spatio-temporal properties of other mediums. For instance, the sequence that presents excerpts from Hit Girl's diary offers another contradiction between the temporal locations of the captions and images. The captions are in the present tense, but are designed to represent handwriting on lined paper, therefore situating them as old media. Furthermore, the images that accompany them have a sepia tint associated with old photos. Stylistic devices therefore represent the pastness of the handwritten diary, while the interplay between text and image allows past and present to exist simultaneously in the same space.

Different stylistic devices are used in the epilogue, in which Red Mist sends Kick-Ass a digital message, to associate digital communication with the present moment. The captions are presented as Apple Mac windows, complete with shortcut buttons in the top left corner while, unlike the rounded font used throughout the comic, the lettering is cleanly defined with straight edges; the kind of default font for Internet-messaging services. This denotes the instantaneous delivery associated with digital messaging. The accompanying images show Red Mist typing, indicating that the captions present what he is typing at that moment. This is the only sequence in the comic in which captions and images temporally align. The fact that the temporalities are drawn together by Red Mist's computer suggests that, while comics can suspend past and present together on the same page, digital media draws events into a singular present moment.



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The notion of digital media drawing events into the present is also evident after Kick-Ass wins his first fight in the second issue, which ends with a full page image of the fight being recorded on an onlooker's mobile phone. The next issue opens with a page designed to recall the YouTube interface, on which the fight is being replayed. Although the standard release gap between two issues in a comic book series is a month, here that time span has been compressed by a representation of digital media returning the reader to the events that closed the previous month's issue. Serialised comics frequently open at the moment that the previous issue closed, but it is significant that in this case time has elapsed within the diegesis, as well as for the reader, so digital playback renews past events for both the characters and the reader.

In representing a video in a still panel, distinctions between the spatio-temporal properties of comics and digital video streaming services are apparent. McCloud argues that readers participate in the narrative flow of a comic through "closure", a process of "observing the parts but perceiving the whole" (1994, 63), where static images and written text are brought to life in the reader's mind. Thus, McCloud describes comics as "a medium where the audience is a willing and conscious collaborator and closure is the agent of change, time and motion" (65). Readers therefore mentally infuse the image of the video with movement. However, it is ultimately stationary, unlike an actual digital video, signalling a clear distinction between comic pages and digital interfaces. Despite this, similarities are evident. Bars above and below the video offer the options to search for more content or rate the video. If we consider the video screen as a panel, then the user is encouraged to fill the space outside of it with information, just as the gutter between panels in comics is the space the reader fills through closure. Furthermore, viewers of YouTube videos can pause and rewind, or navigate to different sections of the website. Comparably, the reader of a comic can determine the pace at which they read, refer back to previous pages, or mentally isolate individual panels.

McCloud labels digital comics that incorporate sound and motion a "mutation" (2000, 210) of the medium, but does not explicitly consider how this challenges, or is accommodated by, his definition of comics. If McCloud were willing to adapt his definition to include such mutations, it may even include interfaces like YouTube's. Meanwhile, a consideration of GUIs that do not incorporate sound and video in relation to McCloud's definition reveals strong correlations. Rather than exploring this, McCloud sees convergence as predominantly outlining medium specificity, claiming "as the technological distinctions between media fall away, their conceptual distinctions will become more important than ever" (205). Yet, as demonstrated above, representations of GUIs in Kick-Ass outline relations as well as distinctions between the spatio-temporal properties of, and experiences offered by, comics and digital media.



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Films can also emulate the ways in which audiences experience comics and digital media, and outline parallels between their formal properties, as evidenced in the film adaptation of Kick-Ass.

Kicking Ass 24x a Second

The sequence in the film adaptation that depicts the video of Kick-Ass' (Aaron Taylor-Johnson) fight going viral presents digital media as both hypermediated and immediate. After Kick-Ass wins the fight, an onlooker filming on their mobile phone approaches and asks his name. Immediately after he says "I'm Kick-Ass" the image freezes and is overlaid with the options YouTube offers to share, replay, respond or watch related videos as the camera pulls away from a laptop monitor.

This seamless edit between the fight and its digital screening present them as occurring simultaneously, suggesting, as did this event in the comic book, that digital media converts the temporal location of events it depicts into the present moment.

The counters that overlay the image as the camera pulls away from the video create a hypermediated aesthetic, which is accentuated by other media within the cinematic frame: the laptop monitor, posters and a television screen. While enabling the moment in which the fight exists to be renewed, its transition into the digital realm therefore also situates it alongside other media. The shot pulls out of the laptop monitor, into the comic shop in which the video is being viewed, and then draws toward a television on which a news report is replaying the video, creating a smooth transition between these physical and mediated spaces. In sharing the same fluid shot these spaces are drawn together, revealing the aptitude for the superhero, a figure traditionally associated with comics, to traverse spaces and mediums.

David Bordwell identifies "a free-ranging camera" (2002, 20) as a key trait of "intensified continuity", a term he uses to describe popular tropes of cinematography and editing in post-classical Hollywood cinema. The primary intention of this style is "to generate a keen moment-by-moment anticipation" (24), continuously directing audience attention to salient elements within the frame. Focusing on specific elements to the extent that other aspects of a scene's construction go unnoticed parallels Bolter and Grusin's notion of immediacy. Films can therefore utilise intensified continuity to simulate immediacy. In this scene, the free-ranging camera is used within a hypermediated environment to guide the audience from the laptop to the television. This provides a fluid segue between 'windows', effectively erasing the presence of other media within the environment.

In travelling from the laptop to the television, this shot illuminates relations between digital media and television that are discussed by Bolter and Grusin, who argue that "the liveness of the Web



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is a refashioned version of the liveness of broadcast television" (2000, 197). As the Web's liveness is a remediation of television, in connecting the YouTube playback of Kick-Ass' fight with a news report in which it is being screened, the immediacy of digital media is affirmed by that of television. Bolter and Grusin outline the mutuality of remediations between the Web and television, observing that "television news programs also show the influence of the graphical user interface when they divide the screen into two or more frames and place text and numbers over and around the framed video images" (40). This is again evident in Kick-Ass as, like GUIs and comics, the news broadcast juxtaposes elements of text and image. The spaces of different media are therefore linked by cinematic technique that outlines similarities in their formal construction.

In the sequence discussed above, it is only when the video freezes that the hypermediacy of digital media is exhibited. This shift from movement to stillness therefore parallels an oscillation between immediacy and hypermediacy. Comics also offer stillness in their hypermediated construction, but when movement is simulated through closure they gain a degree of immediacy. Laura Mulvey argues that cinema's central paradox is "the co-presence of movement and stillness, continuity and discontinuity" (2006, 12). Stillness is traditionally evident in single frames of celluloid, which are not isolated for cinema audiences. However, with digital viewing devices "cinema's stillness, a projected film's best-kept secret, can be easily revealed at the simple touch of a button" (22). As a medium defined by movement and stillness, film is well equipped to represent the ways these function in other mediums. The enhanced ability of digital filmmaking technologies to oscillate between movement and stillness is utilised in two key scenes from Kick-Ass to draw comparisons between the formal properties of, and experiences offered by, comics and digital media. The first presents a comic book that reveals the origin of Big Daddy (Nicholas Cage) and Hit Girl (Chloë Grace Moretz), the second a digital video of Big Daddy fighting gangsters.

As Marcus (Omari Hardwick) reads the comic about Big Daddy and Hit Girl's origin, the shot representing his gaze enters, explores and then exits certain panels in one continuous movement. As it enters panels the illustrations become three-dimensional environments. This presents the idea that, while panels in comics offer fixed views, they suggest spaces beyond their borders, and juxtaposed panels often provide different views of locations, which the reader connects in their head to create complete environments. The fact Marcus' gaze transforms the fixed perspectives offered by panels into navigable environments therefore demonstrates how the reader of a comic participates in spatial construction.



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When exploring the panels the images are not captured by an actual camera, but are constructed digitally. However, the fact that the 'camera' seems to enter the comic from the live action space Marcus inhabits provides a continuous transition from the physical space to the comic's panels. Meanwhile, the characters have ink-black outlines associated with comic book art and speech balloons are present, while the cel-shaded three-dimensional environments are comparable to those found in videogames, creating a hybrid space that recalls both comics and videogames. Bolter and Grusin state that "with the introduction of digital techniques, the Hollywood style has expanded its representational palette from old-fashioned and still popular transparency to at least a moderate degree of hypermediacy and self-acknowledgement" (2000, 154). Interaction between Hollywood technique and hypermediated digital manipulation is apparent in this scene, as the free-ranging camera creates consistency in an environment that exhibits traits of different mediums. In using cinematic technique and digital technology to oscillate between immediacy and hypermediacy in a space that fuses comics and videogames, this imagery suggests that comics and digital media offer comparable experiences of immediacy and hypermediacy.

In the instances that multiple panels are visible in this sequence they are still, two-dimensional images. However, when the shot enters one of these panels the gutters that border it are erased. It is no longer a separate window offering a fixed perspective, but inhabits the whole of the cinematic frame and, although characters remain frozen, the environment is explored. In some cases, shifts in perspective enable narrative development to occur within a panel. For example, one panel shows a living room, the door to which is closed. As the shot enters the panel and circles the room it goes behind the television, and upon emerging from the other side reveals that police have burst through the door. Camera movement therefore triggers narrative developments within still environments. The stillness and hypermediacy of juxtaposed panels on a page segues into movement and immediacy when the shot enters a panel.

The sequence in which Big Daddy is viewed, via digital playback, massacring a warehouse full of gangsters, redeploys this shift from stillness and hypermediacy to movement and immediacy. We see the video selected from a list of digital video files, each presented as still images in small windows and suspended alongside one another, comparable to panels in a comic. Hypermediacy is accentuated by the fact that the interface is displayed on a television that provides another window within the film's frame. However, when the file is selected and begins to play the video expands to inhabit the whole of the television screen, and the camera pulls in so that it also takes up the cinematic frame. This exhibits a steady progression from hypermediated stillness to immediate motion. The transition to immediacy is not completed solely through the number of windowed units



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decreasing until the video playback takes up the whole frame. Initially the video's image possesses a faded, grainy texture, which conveys the sense that this is a recording of a past event. The transition to immediacy is completed when, as the camera pulls into the scene being replayed, the image gains the same clarity as the rest of the film, suggesting that through digital playback the events have been brought into the present.

After entering the image the camera traverses the space, following Big Daddy around. The constant, somewhat disorientating edits are very different from the continuous take in the comic book sequence. This suggests that, while comics allow the audience to manage the temporal flow of events, exploring panels at their leisure, digital interfaces can be typified by a rapid flow of information. However, the editing offers a comparable level of immediacy and immersion as was evident in the comic book sequence. This is outlined by the fact Bordwell identifies rapid editing as another element of intensified continuity, stating that "rapid editing obliges the viewer to assemble discrete pieces of information, and it sets a commanding pace: look away and you might miss a key point" (2002, 24). This commanding pace, like the free-ranging camera, propels the audience through narrative space, focusing attention away from elements of hypermediated construction.

These two sequences therefore utilise intensified elements of Hollywood style to synthesise the hypermediated aesthetics of comics and digital media into cinematic space governed by immediacy. This synthesis is facilitated by the comparable formal properties of comics and digital media, although differences in the presentation of these sequences also represent distinctions between the mediums.

In these sequences Big Daddy's past adventures are suspended in media, which audiences within the diegesis can activate and draw into the present. The diegetic audiences, Marcus and Chris D'Amico/Red Mist (Christopher Mintz-Plasse), are unwanted. While Marcus causes annoyance to Big Daddy, Chris screens the video for his dad, Frank D'Amico (Mark Strong), which leads to the torture and murder of Big Daddy. The imprints superheroes leave in media can therefore lead to their physical capture. Physical actions being enabled through utilisation of media is central to the narrative of Kick-Ass. The film adaptation in particular presents Dave's construction of Kick-Ass as facilitated and threatened by digital media, while battles between heroes and villains are enacted across both physical and mediated spaces.



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The Networked Superhero

In the film adaptation Dave purchases a diving suit from the Internet to use as his superhero costume, but his initial attempts at superheroics lack any other engagement with digital media and end unspectacularly in hospitalisation. After recovering he sets up a MySpace account for Kick-Ass, recognising that he can use social media to culturally disseminate his superhero identity. This is enforced in the voiceover that follows, in which he states “my hardware was fixed now, I was back and running Kick-Ass version 2.0”. In likening Kick-Ass to computer software he announces his superhero identity's entwinement with digital media.

Once Kick-Ass' role as a superhero is culturally acknowledged through the video of his fight going viral, fans contact him via MySpace. This opens virtual doorways between the spaces he and his fans inhabit. Through disseminating himself across online services, which can be accessed through a range of devices, Kick-Ass becomes what Bolter and Grusin call the “networked self”, where an individual's identity is “expressed in the many forms of networked communication on the Internet” (2000, 257). In fragmenting the self across different media the self becomes hypermediated. The networked superhero therefore recalls his origins in the hypermediated medium of comics.

Kick-Ass' networked self is used to locate his physical self when Big Daddy and Hit Girl trace his Internet Protocol (IP) address. Later, Red Mist manipulates Kick-Ass into meeting him through projecting into popular culture a mediated image of himself that cannot fail to agitate and intrigue Kick-Ass. Chris' construction of Red Mist is founded on the staged apprehension of one of his dad's goons, which gains him television coverage on which he promotes his networked self as being “just one click away” at redmist.org. Therefore, while an individual can have their role as superhero socially validated through networking themselves across media, a networked self can be manufactured under false pretence to gain superhero status for nefarious purposes. It is in his deceitfully attained superhero identity that Chris emails Kick-Ass to suggest that they team up.

Once they meet in real life, Red Mist tricks Kick-Ass into leading him to Big Daddy and Hit Girl. Kick-Ass arranges a meeting between the four by setting his MySpace page to “on vacation”; a code previously established whereby a public announcement by Kick-Ass' networked self conveys a private message. Big Daddy then sends Kick-Ass details of the meeting's location via a MySpace message. These interactions between networked superheroes lead to a physical meeting, in which Hit Girl is shot, while Kick-Ass and Big Daddy are taken captive by Frank.



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Understanding the power of digital media to disseminate messages through society, Frank live-streams the torture of Kick-Ass and Big Daddy on the Internet, in an effort to discourage other superheroes. Frank therefore hijacks the cultural prominence Kick-Ass enjoyed through digital media. His live stream is associated with the liveness of television when televised news broadcasts relay the stream. However, when an image of the torture freezes it is revealed that a news report has halted their presentation of the stream as an anchor announces “due to the distressing nature of the images we are unable to broadcast the events currently streaming live on the Internet”. The irony of this statement indicates that, while both television and Internet streams offer experiences of immediacy, television's immediacy is curtailed by external forces such as censorship, which ultimately control the flow of the images, while the Internet grants audiences control over the stillness and movement of often un-regulated content.

Hit Girl rescues Kick-Ass through trumping the immediacy that grants Frank control over mediated spaces. After inhibiting the vision of Kick-Ass' torturers by shooting out the lights, her attack is shot from a first-person perspective that simulates sequences from the Call of Duty videogames, where the player embodies a soldier wearing night vision goggles. This is denoted on the image by a green tint and digital counters presenting the goggles' hypermediated interface. The shots from this perspective are relatively long and depict continuous movements, suggesting that the embodied experiences granted by first-person videogames offer greater immediacy than Frank's live stream. This enables Hit Girl to move freely around the environment and take out the gangsters, who lack her digitally enhanced perspective. Once she has killed her adversaries Hit Girl shoots Frank's camera, halting the live stream and destroying his command over both physical and mediated spaces. Kick-Ass and Hit Girl plan their final assault on Frank's headquarters with the aid of live video streams received from Frank's security cameras, hijacking his spatial mastery obtained through digital surveillance. The appearance of multiple video feeds on a computer monitor recalls juxtaposed panels on a comics page. Just as different views of a location in comics panels allow the reader to mentally construct a complete environment, the juxtaposed video feeds map Frank's headquarters.

Commanding virtual control over physical spaces through digital technologies facilitates physical mastery of these environments. The liberated movements of the superhero can therefore act as a metaphor for the spatial mastery enabled by digital media. Considering this, it is appropriate that Dave's savvy utilisation of digital media culminates in him piloting a jetpack that was purchased, not incidentally, through the Internet. While this is a marked deviation from the far less glamorous finale in the comic book, and could be seen as surrendering to Hollywood convention, it is actually Dave's heightened utilisation of digital media in the film that enables this flight. Through the



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successful construction of a networked superhero self, Kick-Ass achieves the spatial mastery of a bona fide superhero.

After their victory against Red Mist and Frank, Kick-Ass and Hit Girl land on a rooftop and stand heroically, silhouetted against the city skyline, certifying their status as superheroes. This shot echoes the opening panel of the comic, enforcing how, unlike the ill-fated superhero depicted in that, Dave has gained the ability to freely traverse, both virtually and physically, the landscape that stretches out before him.

The narrative of Kick-Ass tracks the development of a superhero through his interactions with digital media. Through analysing stylistic devices deployed in the comic book and film, it is evident that the hypermediated nature of comics provides a platform from which superheroes can leap into other media. The superhero's journey from print comic books to digital platforms is facilitated by their comparable spatio-temporal properties. Each spatially arranges different representational forms in ways that encourage audiences to interact with and master these spaces. The reader of a comic mentally activates narrative space, facilitated by the juxtaposition of still images that suggest diegetic environments' dimensions. Meanwhile, audiences of digital media may activate digital videos through the click of a button, or explore three-dimensional environments in videogames. In regards to temporality, while the static panels of comics suspend moments in a vacuum and present them alongside one another simultaneously, the dynamic screens provided by digital technologies constantly renew events and pull them into the present. Each offers a kind of temporal mastery. Comics allow readers to select moments from a sequence of juxtaposed images and travel back and forth through the narrative at will. Digital storage and playback enables past moments to be brought into the present. Comics and digital media therefore offer comparable levels of spatio-temporal mastery and experiences of immediacy through their related, but distinct hypermediated construction. The impact of digital technology on all media allows the spaces between them to be more freely traversed. However, it is only through mastering the complexities of these mediated spaces that flights of fancy can really take off.



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