

**The practical application of McCloud's horizontal  
'Infinite canvas' through the design, composition and  
creation of an online comic.**

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Master of Arts

2006

RMIT

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'Infinite canvas' through the design, composition and  
creation of an online comic.**

An exegesis submitted in fulfilment of the requirements for the  
degree of Master of Arts

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March 2006

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## 1.0 Rational:

The term 'Infinite canvas' was established by comic creator and theorist Scott McCloud in his book *Reinventing Comics* (McCloud, 2000). The term was created by McCloud to describe his theory that the web page, with its ability to be any height or width in a digital environment, would free comics from the constraints of the printed page and revolutionise the way comics were created for the Internet. *Reinventing Comics* (McCloud, 2000) was one of the first theoretical texts to be published about comics on the Internet and is seminal text that has been widely applauded<sup>1</sup> and criticised<sup>2</sup> by the comic book industry since its publication.

This research examines the application of McCloud's theory of the Infinite canvas, specifically the horizontal example outlined in *Reinventing Comics* (McCloud, 2000). It focuses on the useability and effectiveness of the Infinite canvas theory when applied as a practical example of a comic outcome for the Internet. This practical application of McCloud's horizontal Infinite canvas model has been achieved by creating a digital comic entitled *Sad Reflections*,<sup>3</sup> a continuous horizontal narrative that is 20cm in height and 828cm in length and was designed to be viewed in a digital environment. This comic incorporates traditional comic techniques of gutters, time frames, line, with combining words and pictures, as outlined by McCloud (1993) in his first theoretical text *Understanding Comics*. These techniques are used to ensure that the project fulfilled the technical criteria used by the comic book industry to create comics. The project also incorporates McCloud's personally devised Infinite canvas techniques of trails, distance pacing, narrative subdivision, sustained rhythm

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<sup>1</sup> 'McCloud very accurately and level-headedly takes time to explore the origins of the Internet and the World Wide Web making this as much a history lesson as a manifesto. He develops very reasoned explanations on how he reaches his conclusions too, particularly when it comes to the business and distribution side of digital comics. Most appreciatively though, he doesn't offer up any wholesale criticism without being willing to try and offer solutions to those problems. He takes the time to explain why certain revolutions in each of the three internet-related areas are important, and builds on the previous chapters of the book. Although a little long-winded, with the history lessons gaining more and more prominence towards the end of the book, it is a fascinating road map for the future of comics' wrote Butcher (2000) in his online review of *Reinventing Comics* (McCloud, 2000).

<sup>2</sup> 'Like much of McCloud's writing, it's overly broad, ignores much of the existing world of online comics and written ... with no discussion of why such systems have failed in the past, suggestions for how such schemes could exist in the real world, or addressing the potential drawbacks of alienating an audience that is used to getting content for free' wrote Rosenberg (2000) in his online review of *Reinventing Comics* (McCloud, 2000).

and gradualism as outlined on his website.<sup>4</sup> These new techniques are applied to assess their effectiveness in the creation of the horizontal Infinite canvas and their ability to be integrated with traditional comic techniques.

The focus of this project is to examine the strengths and weaknesses of McCloud's Infinite canvas theory when applied to the practical online comic outcome *Sad Reflections*. Three key questions are used to guide this research. These questions are:

1. Does the application of traditional comic techniques affect the effectiveness of the Infinite canvas when implemented to a horizontal format?
2. Are the new Infinite canvas techniques as outlined by McCloud<sup>5</sup> able to be applied to a horizontal format and what impact do these techniques have on the process?
3. Is the application of a horizontal Infinite canvas of benefit to future developers of web comics?<sup>6</sup>

Based on the outcomes of the above questions, this paper will nominate strategies, considerations and suitable production processes for future developers of web comics.

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<sup>3</sup> Written by Daniel Flood, *Sad Reflections* is a one act play script, featuring two characters and one location. Permission was granted by the playwright for the adaptation of the *Sad Reflections* play to be used for this project.

<sup>4</sup> Scott McCloud, 'I can't stop thinking #4', *Online Comics*, viewed 1 March, 2006, <http://www.scottmccloud.com/comics/icst/icst-4/icst-4.html>

<sup>5</sup> Ibid.

<sup>6</sup> Web comics, also know as online comics, are comics primarily created for the Internet. Some creators use web comics as a promotional tool to find print publishing employment, while others create only works that can be shown within a digital environment.

## 2.0 Introduction:

In 1993 comic creator and theorist Scott McCloud<sup>7</sup> wrote *Understanding Comics* (McCloud, 1993). It was the first of two theoretical texts by McCloud that examined the medium of comics; the origin, design, construction and creation. In *Understanding Comics* McCloud (1993) reworks much of the same content as *Comics and Sequential Art* (Eisner, 1985) a theoretical text written by the elder statesman of comics Will Eisner.<sup>8</sup> Despite this, McCloud's text was widely applauded<sup>9</sup> as a clear, definitive deconstruction of the history, meaning and art of comics. Much of this praise surrounded McCloud's innovative use of a comic book format to discuss comic theory.<sup>10</sup> In *Understanding Comics* McCloud (1993) employs this technique by introducing the reader to a hand drawn cartoon avatar of him. It is the cartoon McCloud, with the assistance of word balloons and panels, that 'walks' the reader through a technical discussion of comic book theory via the application of the comic book format. *Understanding Comics* (McCloud, 1993), by this show and tell method, clearly

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<sup>7</sup> Prior to the creation of *Understanding Comics*, McCloud (1993) established himself as a force in the comics industry through independently published print comics such as *Zot!* (McCloud, 1984); a light hearted superhero comic series, and *The New Adventures of Abraham Lincoln* (McCloud, 1998); a printed graphic novel created through the use of computer-generated and digitally drawn images. These publications by McCloud were roundly condemned by Garry Groth, editor of the *Comics Journal* in his scathing article 'McCloud Cuckoo-Land'. Groth stated 'Previously, McCloud was best known for *Zot!*, a manga-inspired comic's series about a teen-aged superhero published in the 1980s. This was competent enough superhero work, sentimental, charming and almost endearingly old-fashioned in those pre-*Dark Knight* days, but against the backdrop of Art Spiegelman's groundbreaking *Maus*, the Hernandez Brothers' innovative visual vocabulary which they used to explore characterological and social issues in *Love & Rockets*, the anthologies of *RAW* and *Weirdo*, the liberating humor of Peter Bagge and Chester Brown, new artists pushing the boundaries of what we had come to know as comics and older artists doing the best work of their lives, *Zot!* was by general consensus inconsequential, even regressive'. Groth goes on to discuss *The New Adventures of Abraham Lincoln* (McCloud, 1998) stating 'Between *Understanding Comics* and *Reinventing Comics*, McCloud went back to narrative fiction and made the mistake of indulging his theories, particularly his new-found love of computer technology (and apparently his hatred of beautiful drawing) by producing - or do I mean manufacturing? - a miscarriage called *The Adventures of Abraham Lincoln*, a book that failed on every conceivable level: satirically, visually, conceptually, even technologically. If an author could refute the practical value of his own theorizing about art and technology, McCloud succeeded in doing it in this book'.

Groth, G 2002, 'McCloud Cuckoo-Land', *Comics Journal*, vol. 232, viewed 1 March, 2006, [http://tcj.com/232/r\\_cuckoo.html](http://tcj.com/232/r_cuckoo.html)

<sup>8</sup> Will Eisner 1917 – 2005. One of the earliest comic book creators Eisner began his career in the 1930's. For 12 years he wrote and created the weekly newspaper comic *The Spirit* which was syndicated world wide. For many years he created educational comics for the army of the United States of America releasing monthly technical manuals in comic form. In 1978, Eisner is best remembered for his graphic novel *A Contract With God* (Eisner, 1978). His text *Comics and Sequential Art* (Eisner, 1985) was created from several years teaching at the New York School of Visual Arts.

<sup>9</sup> Will Eisner describes *Understanding Comics* (McCloud, 1993) as 'a fine book' in his text *Graphic Storytelling and Visual Narrative* (Eisner, 1996)

<sup>10</sup> This use of a comic to examine comics had not been used before; however the use of comics as texts had been, by Will Eisner in the 1942. Will Eisner created posters, illustrations and strips for the education and entertainment for the army of the United States of America during World War II.

examines traditional comic techniques such as gutters, text, time frames, line, as well as combining words and pictures.

In 2000, McCloud released a second theoretical text titled *Reinventing Comics* (McCloud, 2000).<sup>11</sup> This text outlined McCloud's expansive and enthusiastic vision for comics on the Internet.<sup>12</sup> In *Reinventing Comics*<sup>13</sup> McCloud (2000, p. 207) theorises that a 'technological landscape' such as the internet offers a greater potential to comics than print; greater communication between creator and reader, wider genre availability, and more innovative design opportunities. McCloud also states that comics need to find a durable mutation from their current online form to survive successfully on the Internet. One such 'durable mutation' is McCloud's personal solution the 'Infinite canvas', a spatial model which focuses on the ability for the Internet page to be any height or width in a digital environment.

*Reinventing Comics* (McCloud, 2000) focuses extensively on the Infinite canvas and it is best known for this controversial promotion<sup>14</sup> of digital technology and the creation, delivery and marketing of comics on the Internet.

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<sup>11</sup> Reprising his cartoon avatar, McCloud once again 'walks' the reader through the theoretical text. The success of this format reused in *Reinventing Comics* (McCloud, 2000) is questionable. McCloud (2000) admits in *Reinventing Comics* that the comic panel structure such that 'the artist may have to reorganise, lengthen or shorten a sequence to accommodate them'. McCloud (2000, pp. 221) goes on to confess to the reader that 'I do it all the time! Go back and see if you can spot my various stalling and compression tactics throughout this book'. This reuse of the comic book format by McCloud as a means of relaying information was criticized by Groth as an ill conceived attempt to capitalise on the success of *Understanding Comics* (McCloud, 1993), without due regard for the newer, more complex subject matter.

Groth, G 2002, 'McCloud Cuckoo-Land', *Comics Journal*, vol. 232, viewed 1 March, 2006, [http://tcj.com/232/r\\_cuckoo.html](http://tcj.com/232/r_cuckoo.html)

<sup>12</sup> Groth criticises McCloud's untempered enthusiasm for the internet as 'wholly uncritical, indeed, breathless and drooling enthusiasms for technology irrespective of their grounding in reality or even commonsense'.

Groth, G 2002, 'McCloud Cuckoo-Land', *Comics Journal*, vol. 232, viewed 1 March, 2006, [http://tcj.com/232/r\\_cuckoo.html](http://tcj.com/232/r_cuckoo.html)

<sup>13</sup> There has also been some criticism of McCloud's redefinition of what comics are, originally established by Will Eisner. McCloud begins the chapter 'The Infinite Canvas – Digital Comics' by reiterating on his definition of comics as a 'juxtaposed pictorial and other images in deliberate sequence'. McCloud first developed this definition in his text *Understanding Comics* (McCloud, 1993) to expand on the previously accepted definition of 'sequential art' coined by predecessor Will Eisner in 1978. McCloud's full definition as stated in *Understanding Comics* (McCloud, 1993) was a 'Juxtaposed pictorial and other images in deliberate sequence, intended to convey information and/or to produce an aesthetic response in the viewer'. It is worth noting here that it is not discussed in *Reinventing Comics* as to why McCloud (2000) does not use his previous longer definition. For the purpose of the chapter 'The Infinite Canvas – Digital Comics' we are reminded on several occasions that the definition is a 'juxtaposed pictorial and other images in deliberate sequence' (McCloud, 2000, pp. 200).

<sup>14</sup> Groth, G 2002, 'McCloud Cuckoo-Land', *Comics Journal*, vol. 232, viewed 1 March, 2006, [http://tcj.com/232/r\\_cuckoo.html](http://tcj.com/232/r_cuckoo.html)

Other issues outlined in *Reinventing Comic* (McCloud, 2000) that were hotly debated by industry members were:

1. The viability of online payment and distribution of digital content through a micro payment system,<sup>15</sup>
2. McCloud's rejection of multimedia<sup>16</sup> as an internet comic tool,<sup>17</sup>
3. The viability of the Infinite canvas<sup>18</sup> as a comic format in a digital environment.<sup>19</sup>

McCloud has also been criticised for the Pollyanna-ish tone of the text,<sup>20</sup> with his boundless enthusiasm seen as shallow and unrealistic. McCloud's loose and incorporative theory of comic book history was also attacked as '*...irrelevant at best, a historical sophistry at worst*'.<sup>21</sup>

### 3.0 Theoretical and technical contexts

McCloud describes *Reinventing Comics* (2000) as a sequel to *Understanding Comics* (1993).

*Reinventing Comics* (McCloud, 2000) is divided into two sections. The first section,

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<sup>15</sup>Sean Barret, a game developer, presents a measured discussion expressing his concerns of the micro payment system on his website. This article is directly linked from McCloud's website as an acceptable discussion of the micro payment system supported by McCloud.

Barret, S 2001, 'Micropayment Barriers', *Home page of Sean Barrett, dysfunctional programmer*, viewed 20 January 2006, <http://www.nothings.org/writing/upay.html>.

Not all industry professionals shared Barret's views. A flame war erupted primarily between Scott McCloud and Jerry Holkins, also known by his online persona 'Tycho', a founding member of the popular online comic centre Penny Arcade. A visual condemnation of McCloud's micro-payment systems can be found on the Penny Arcade website on <http://www.penny-arcade.com/news.php3?date=2001-06-22>. Much of the flame war has been removed from public viewing such as Holkins pointed attack of McCloud and his micro payment system <http://www.penny-arcade.com/news.php?date=2001-06-22#braving> after retractions by both McCloud <http://www.scottmccloud.com/home/xtra/backlash.html> and Holkins. In a recent post on the Penny Arcade website Holkins, while stating that he still does not totally agree with McCloud's stance has relented on his hard line anti-micro payment approach <http://www.pennyarcade.com/2005/11/14#1131997200>.

<sup>16</sup> McCloud, S 2000, *Reinventing Comics*, New York, pp. 207-210.

<sup>17</sup> Jung-Hoon Seo, J 2002, 'Digital comics and Multimedia', *Massachusetts Institute of Technology*, viewed 20 January 2006, <http://plw.media.mit.edu/people/jseo/courses/cms871/final-paper.html>

<sup>18</sup> McCloud, S 2000, *Reinventing Comics*, New York, p. 222-228.

<sup>19</sup> Zabel, J 2000, 'Focus on Reinventing Comics', *Amazing Montage Magazine*, viewed 20 January 2006, <http://amazingmontage.tripod.com/am200006.html#intro>

<sup>20</sup> Zabel, J 2000, 'Focus on Reinventing Comics', *Amazing Montage Magazine*, viewed 20 January 2006, <http://amazingmontage.tripod.com/am200006.html#intro>

<sup>21</sup> Groth argues that McCloud's arbitrary selection of radically different historical visual narratives from several cultures is opportunistic and academically unsound stating 'Clearly, the Tomb of Menna, the Trojan Column and the Codex Nuttall come from a different tradition than that of mass culture and invoking them to legitimise the application of digital technology to comics is irrelevant at best, ahistorical sophistry at worst. Digital comics will succeed or fail on their own merits, not because of any theories based on ancient uses of drawn narratives'. It is interesting to note that Groth does not reference an alternative historical time-line to challenge McCloud's theory, nor does he direct readers to more appropriate text.



'Windmills and Giants', focuses heavily on the current comic industry's print and distribution procedures. The second section, 'Catching a Wave', is an energetic look at the use of digital processes for comics' creation in an online context. Described by McCloud as 'a full-blown manifesto for radical change', this second section outlines the basis of the Infinite canvas theory in the chapter titled 'The Infinite Canvas – Digital Comics'.<sup>22</sup>

To situate his theory of the Infinite canvas in the context of traditional comics, McCloud begins the chapter by redefining the historical foundations of comics. McCloud states that, by applying his definition of comics as a 'juxtaposed pictorial and other images in deliberate sequence'<sup>23</sup> to a number of different historical artworks, several key design elements expressed in comics can be found in works over 3000 years ago. McCloud cites examples such as;

- The 'Bayeux tapestry' a 230-foot long horizontal tapestry detailing the Norman conquest of England beginning in 1066,
- The 'Tigers Claw' (also know as Ocelot's Claw) a 36-foot long pre-Columbian picture manuscript discovered by Cortes around 1519 and,
- The ancient Egyptian tomb burial paintings such as the tomb of 'Menna the Scribe' circa 1,200 BC.

While acknowledging that the origin of comics is unknown, McCloud states that these examples fit the definition of comics he presents. All works show a 'juxtaposed pictorial and other images in deliberate sequence,'<sup>24</sup> each telling a story in a deliberate sequence moving on a single path from one moment to the next, in a 'winding but unbroken zigzag.'<sup>25</sup>

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Groth, G 2002, 'McCloud Cuckoo-Land', *Comics Journal*, vol. 232, viewed 1 March, 2006, [http://tcj.com/232/r\\_cuckoo.html](http://tcj.com/232/r_cuckoo.html)

<sup>22</sup> The second section of *Reinventing Comics* (McCloud, 2000, pp. 127) is titled 'Catching a Wave'. Chapters found in this section are 'The thing about tools', 'Through the door – digital production', 'The frictionless economy – digital delivery', and 'The Infinite Canvas – Digital Comics'.

<sup>23</sup> McCloud, S 2000, *Reinventing Comics*, New York, p. 200.

<sup>24</sup> Ibid.

<sup>25</sup> Ibid.

McCloud contends that, unlike the constraints of the modern print page, these early artists were free to create continuous and less structured narratives. Their artwork was able to be any height and width dictated only by the availability of the physical space such as cave walls. With the invention of print however, McCloud states that these artworks were forced to adapt their narratives to the layout requirements of the printed page.<sup>26</sup> In response to this new format more modern examples such as the ‘Tortures of Erasmus’ circa 1490, a woodcut depicting various tortures through the use of panelling, and the work of Rodolphe Toppfer, a Swiss cartoonist who published a series of seven proto-comics during the mid-1800’s, began to show more familiar comic devices. These devices were panel borders, reading protocols of left-to-right and up-to-down, and the use of speech. McCloud describes these more complex reading protocols as a series of cul-de-sacs that ask the reader to redirect the path every few panels.<sup>27</sup> This constant changing of direction required ingenuity on the part of the artist to lead the reader through this complex visual maze from beginning to end.<sup>28</sup>

McCloud however believes that this has begun to change with the development of the Internet. In *Reinventing Comics* McCloud (2000, p. 222) theorises that comics will again have the freedom to extend the physical perimeters of comics through the design opportunities offered by a digital ‘Infinite’ canvas and the ability of the web page to be unconstrained by predetermined limitations of height or width. Focusing on the potential offered by this ‘technological landscape’<sup>29</sup> McCloud believes that the ultimate goal for comics is ‘to find a durable mutation that will continue to survive and thrive well into the new century.’<sup>30</sup> McCloud solution for the perceived need for a durable mutation is the ‘Infinite canvas.’ Described by McCloud as potentially ‘part of the evolution’ of comics, it is his belief that

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<sup>26</sup> McCloud (2000, p. 220) states in *Reinventing Comics* that print ‘presented a landscape of tiny cul-de-sacs, asking readers to leap to new paths every few panels based on a complex protocol ...imported from the right and down tradition of the printed word’.

<sup>27</sup> Ibid.

<sup>28</sup> McCloud states that for the benefit of print comics have me forced to fit into tiny boxes that forces both reader and creator to battle with ‘every few inches, a new barrier is reached, another limitation tackled’ due to the size limitations of the printed page (McCloud, 2000).

Ibid.

<sup>29</sup> McCloud, S 2000, *Reinventing Comics*, New York, p. 207.

<sup>30</sup> Ibid.

spatial models such as the Infinite canvas will allow comics to cement their place in a digital environment.

#### **4.0 The Infinite canvas**

The term the Infinite canvas can be described as; a single Internet page that can be any height or width as required by the comic artist. McCloud describes the Infinite canvas as a window into a digital environment rather than simply as a page. Access to these expanded comics by the reader is achieved through the use of the scroll bars or other digital navigational tools embedded into the page.

McCloud (2000, p. 224) concedes that a true Infinite canvas may not be possible with physical limitations such as Internet connection speeds, computer processing and storage capacity however he argues that while ‘a literally ‘infinite’ canvas may never exist... the experience of such spatial freedom lies just beyond the very finite limits of human perception.’

McCloud states that, with the potential to be virtually any size or shape, there are few limitations as to how a comic could be created and displayed with the Infinite canvas in a digital environment. Several examples given by McCloud of potential design options are:

1. *A continuous vertical canvas.* This canvas begins at the top of the page, requiring the reader to continuously scroll down using the side scroll bars to read the story.
2. *A continuous horizontal canvas.* Beginning at the side of the screen, usually from the left, this option requires the reader to continuously scroll across the screen using the horizontal scroll bar to read the story.

3. *A continuous descending staircase of linked panels.* A canvas design that displays the images connected in a staircase manner, requiring the reader to use both side and bottom scroll bars to navigate as the images 'step' down and across the page.
4. *A revolving cube, each face occupied by multiple panels.* While McCloud suggests this option briefly he does not discuss the practical application of this suggestion or the navigational requirements needed for the reader to interact with this application of the Infinite canvas.
5. *A forty thousand panel square matrix.* A large digital canvas that extends forty thousand panels in height and width in a square shaped design. McCloud (2000, p. 225) admits that such a large number of panels is currently unfeasible but justifies the example by stating 'but that's no reason not to give our imaginations a good head start!' McCloud suggests that a combination of giving the readers the ability to zoom into a required section and the implementation of innovative file management would be required to achieve this option. While an interesting theory McCloud offers not comment on the overall reading experience of the content with such a navigationally driven comic.
6. *Linking panels together via a visual thread.* Allowing the comic to utilize the canvas in an unregimented fashion, continuity between the panels is achieved through the use of a continuous line linking all panels together. This line assists the reader to navigate the narrative path.
7. *A panel within a panel design.* This panel design takes the reader into the comic rather than along it. Read as one single panel after another, a small replica of the next panel is imbedded in the current image. Readers access the next panel by clicking on the small replica. This small image then expands to replace the previous panel.
8. *Multiple panels turned at right angles to each other.* Exploring the integration of three dimensional spaces, McCloud (2000, p. 227) suggests that this method may instil suspense in the reader for the next panel and 'keep them off guard'.

9. *The use of pictorial shapes to indicate the overall thrust of the story.* McCloud (2000, p. 227) states that by ‘giving a pictorial shape to whole stories may provide a unifying identity.’

Of the above Infinite canvas models suggested by McCloud, the continuous horizontal model was selected. This model was selected as it displayed similar characteristics to the examples given by McCloud as his historical justification of the Infinite canvas concept. These examples; The ‘Bayeux tapestry’ the ‘Tigers Claw’ and the ancient Egyptian tomb burial paintings of ‘Menna the Scribe’ are all read in a continuous scroll, from beginning to end in a single unbroken narrative, and all conform to a similar elongated shape. When examining the nine design concepts proposed by McCloud, the continuous horizontal Infinite canvas was the only model that closely reflected the characteristics of these earlier examples, and was therefore chosen for the *Sad Reflections* project.

McCloud has created works for four of his nine of Infinite canvas models. These are the continuous vertical canvas model, a continuous descending staircase of linked panels, linking panels together via a visual thread and the panel within a panel design model. While all were produced for his website, McCloud has only offered some published findings for his vertical Infinite canvas model. Within these findings McCloud personally devises several new Infinite canvas techniques he believes were required by the digital environment they inhabit.

These new techniques are identified as;

1. Trails; the use of trails to link panels together in an Infinite canvas environment,
2. Distance pacing; the application of distance pacing or the manipulation of time by the use of varying distances between panels to increase or reduce time,
3. Narrative subdivision; the potential of narrative subdivision as the freedom to subdivide a narrative when dictated by the artist and not by the page count as seen in traditional print comics,
4. Sustained rhythm; the use of sustained rhythm with the development of atmosphere through sustained uninterrupted sequences, and

5. Gradualism; the use of gradualism utilizing the ability to gradually reveal images to the reader through the navigation of the story.

These techniques will be applied to the horizontal Infinite canvas model to assess the impact these techniques have on the process and how they relate to traditional comic techniques as outlined by McCloud (1993) in *Understanding Comics*.

## 5.0 Written Narrative

After the selection of the horizontal Infinite canvas model as the format for this project, the next step identified was the selection and application of an appropriate written narrative. An important correlation identified between the horizontal Infinite canvas and the inherent story characteristics shown in the 'Bayeux tapestry', 'Tigers Claw' and 'Menna the Scribe' was the use of a continuous unbroken narrative. When selecting a narrative for the project, it was noted that a one-act theatrical script reflected this structure, with its use of a singular location and continuous unbroken sequence of events from beginning to end.<sup>31</sup> As this narrative structure clearly reflected the examples given by McCloud as historical indications of his horizontal Infinite canvas theory, a one act play was chosen for this project.

The play selected was titled *Sad Reflections*, written by playwright Daniel Flood. *Sad Reflections* was specifically chosen for its small number of characters, singular location, and one-act length. The script also employed the use of dream and flash back sequences while remaining an unbroken narrative which potentially allowed for exploration of variant panel structure.

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<sup>31</sup> The use of a play as a comic script has been successfully achieved by Alan Moore and Eddie Campbell in both published comics 'The Birth Call' and 'Snakes and Ladders'.  
Moore, A & Campbell, E 2005, *A Disease of Language*, Great Britain.

*Sad Reflections* is an exploration of the relationship between a brother and sister, life and death. It is an intimate human drama with a cast of two characters, Anna and Mike. The story takes place at their final meeting.

The utilization of the one-act play *Sad Reflections* for the project was found to be successful on several levels by the artist. The inherent nature of a play allows the writer to 'direct' the characters for the visual artist without limiting the visual potential of the scene. The staging, props and character descriptions are clearly defined, narrowing the potential of misinterpretation of the written work.

The application of traditional comic techniques as a guide to the process of creating the horizontal Infinite canvas were found by the artist to be very helpful, often offering solutions to otherwise difficult situations such as the arrangement of panels, gutters and speech balloons.

McCloud (2000) does not address the selection or creation of a written narrative for comics in his text *Understanding Comics*. This lack of guidance points towards a personal bias by McCloud of the importance of image over narrative. Although McCloud does spend an entire chapter discussing the need for equal balance between the two elements, at no time does he discuss in any detail the practical application or selection of a narrative structure or examples of a comic script. This oversight devalues the overall text leaving it incomplete.

## **6.0 Traditional comic techniques applied the horizontal Infinite canvas**

In *Understanding Comics*, McCloud (1993) lists several traditional comic techniques used to create print comics. These techniques are gutters, time frames, line, with combining words and pictures. When applying *Sad Reflections* to the horizontal Infinite canvas model, these techniques were used as the core structure to ensure the integrity of the project as a comic. These techniques also provided the framework for which to analyse the ability of the horizontal Infinite canvas model to conform to traditional comic conventions as clearly outlined by McCloud (1993) in *Understanding Comics*.

### **Gutters**

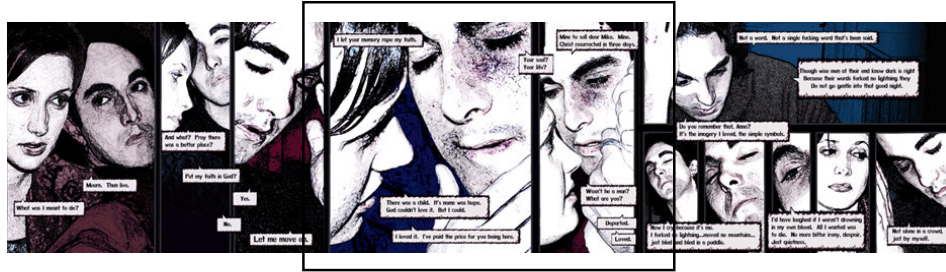
The first of the traditional comic techniques to be analysed is the ‘gutter’.<sup>32</sup> As defined by McCloud (1993) in *Understanding Comics* the term ‘gutter’, also known in the industry as ‘blood in the gutters’, is used to describe the space between two panels. It is in this space between panels that time, motion and audience participation are created. McCloud states that when two static images are placed side by side, it is the reader that perceives the events that have occurred in the space or ‘gutter’ between; the violence of an unseen crime, the rhythm of the action and the time taken between images. By placing two or more panels in a sequence leaving a space or ‘gutter’ between them, the reader connects these separate panels into a single idea to create a whole story. McCloud (1993, p. 69) describes this process, of ‘observing the parts but perceiving the whole’ as closure. Closure can be used to create suspense and intimacy with the reader creating a ‘silent secret contract between creator and audience’.

The application of both panels and gutters are intrinsic to each other. McCloud (1993, p. 69) likens this combination of elements as ‘several times on every page the reader is released – like a trapeze artist – into the open air of imagination then caught by the outstretched arms of



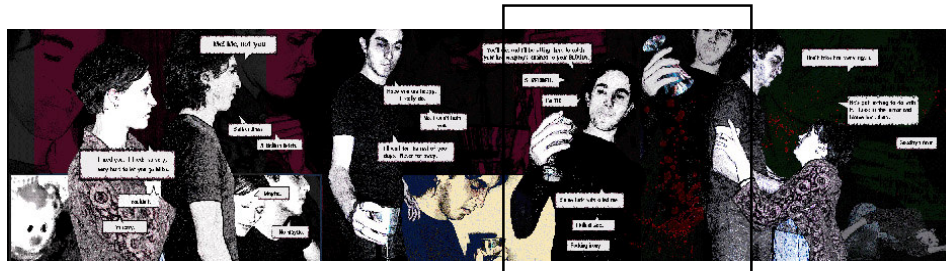
the ever-present next panel!' McCloud (1993, pp. 70-72) sections this trapeze act into six panel transitional techniques:

1. *Moment-to-moment*; this panel transition requires very limited closure and describes small movements or moments in sequence i.e. first panel: eyes open, second panel: eyes closed.



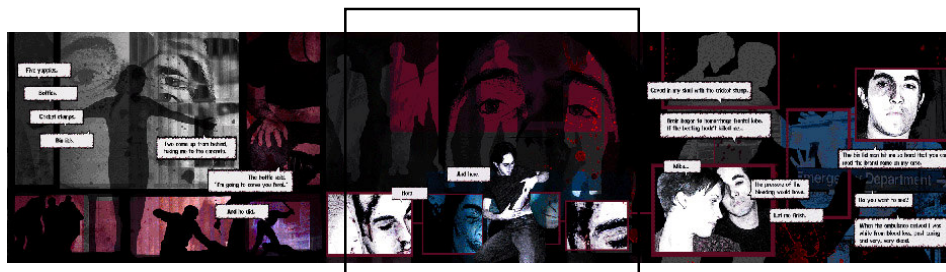
Moment-to-moment panel transition as applied to *Sad Reflections*, pp. 23 - 25.

2. *Action-to-action*; used to progress the actions of a single subject this panel transition is often used in an action to reaction sequence i.e. first panel: speeding car, second panel: car crash.



Action-to-Action panel transition as applied to *Sad Reflections*, pp. 28-30.

3. *Subject-to-subject*; when employing a subject to subject panel transition the scene or idea remains the same; however the reader is an active participant in the resolution between panels. I.e. first panel: man being chased by axe murderer, second panel: a scream sound effect on a darkened sky.



Subject-to-subject panel transition as applied to *Sad Reflections*, pp. 17 - 19.

<sup>32</sup> Technique assessed by the artist in relation to the project *Sad Reflections*.



All of the six panel transitional techniques above were used in *Sad Reflections*. When applying these panel transitions it was found that the techniques only affected the content of the panel and not the physical structure itself. Selection of the panel transitions was found to be based on the artistic merit of the technique in relation to the narrative rhythm of the story. As *Sad Reflections* was based on a quiet family drama the more dramatic panel transitional techniques of action-to-action, subject-to-subject and scene-to-scene were used minimally. The more contemplative moment-to-moment and aspect-to-aspect panel transitional techniques were found to be far more appropriate to realistic human interaction. The most difficult panel transitional technique to apply was the non-sequitur. The use of widely disparate images assembled side to side did not fit comfortably within the intimate confines of the chosen narrative and was used only once in this project. None of the content in the six panel transitional techniques outlined by McCloud (1993) in *Understanding Comics* created any perceivable difficulty when applied to the horizontal Infinite canvas model.

### **Time frames**

The second traditional comic technique analysed was 'time frames'.<sup>33</sup> A time frame is the term used to describe the length time taken to tell the story as perceived by the reader. McCloud (1993, p. 107) states that in comics, this time is perceived by the reader spatially because the use of time and space are interrelated in comics. This perceived time can be influenced by the use of motion and sound.

McCloud states that motion can be divided into two subsets: The use of panel-to-panel closure as explained previously in the application of gutters, and the use of motion within panels. Examples of motion within panels are:

1. *Motion lines*; the fine lines drawn to imply the path of the moving object i.e. a swinging bat.

2. *Multiple images*; the use of shadow drawing to imply the residual movement left by speed i.e. multiple drawings of a running figure in the one panel.
3. *Streaking effects*; the blurring away of the background information to imply speed.
4. *Subjective motion*; where the action is drawn from inside the event to act as the readers' point of view i.e. close-up shots of the speedometer on a speeding vehicle.
5. *Polyptych*; the use of a moving figure interacting with a consistent background i.e. a character moving around a small room over several panels.



Polyptych motion within panel transition as applied to *Sad Reflections*, pp. 5 - 7.

Of the above motion within panel techniques only the polyptych was used in *Sad Reflections*. As stated in the description of ‘motion with in panel techniques’ these applications affect the content of the panel only and not the panel itself. The use of the polyptych method was particularly useful in *Sad Reflections* as the comic was set within the same location for the entire story. It was found<sup>34</sup> that the after the initial establishment of location, the background images could be partially obscured throughout to direct focus to the developing narrative. The use of the motion within panel did not affect their application to the horizontal Infinite canvas model.

Motion can also be created by the panel itself. McCloud states that the use of different panel shapes, the application of borderless panels and use ‘bleed’ panels that extend to the very edge of the page can also affect the perceived time frame. He also points out that the lack of

<sup>33</sup> Technique assessed by the artist in relation to the project *Sad Reflections*.

<sup>34</sup> Ibid.

motion can also be a very powerful tool to establish time. A dripping tap shown in successive frames can establish a slower pace than would be perceived by a speeding car.

When creating *Sad Reflections*, a mixture of bordered, borderless and bleed panels were used. The visual combination of bordered panels and borderless panels in the first few pages of this work successfully achieves a sense of timelessness and the dreamlike quality required by the narrative.



The comic begins with the character Anna alone in the room and praying. The flexibility of the borderless and bleed panels in the background gives the impression of silence and isolation, while the use of the bordered panels in the foreground focuses these emotions through the use of wide gutters and minimal character movement. The combination of these styles when applied to the horizontal Infinite canvas model in this section work successfully together to prolonging the mood established.

When the project moved to the use of more bordered panels some technical issues became apparent with their placement and layout. As the physical edge of the printed page in traditional comics acted as a guide directing the reader back through a page of panels, the lack of a defined horizontal edge in the horizontal Infinite canvas model breaks this unspoken reading agreement, leading to a loss of narrative direction and clarity. It was found by the artist that a solution was required to develop a visual ‘full stop’ to guide the reader through the story while still preserving the continuous nature of the horizontal format. Through

experimentation several possibilities presented themselves. One of these was the use of a bordered panel that ran top to bottom of the horizontal height. These full panels could be used



Decreased narrative clarity.

Top to bottom panels applied as a visual 'full stop'.  
*Sad Reflections*, pp. 6 – 8.

side by side to progress the story along the horizontal format, changing panel widths to increase or decrease the speed of the narrative. They could also be used in a more structural approach by book-ending smaller bordered panels and supplying the reader visual guidance to navigate the story. This method directs the reader through the narrative in a top to bottom continuous wave pattern similar to that used in pre-comics as cited by McCloud.

When focusing on sound, McCloud again states that it can be divided into two subsets: the application of speech balloons and sound effects. Both of these elements effect the duration of a panel by either their application or elimination. For example successive panels with dialogue between multiple characters will move quickly as the byplay creates an action and reaction rhythm. A silent panel without dialogue or sound effects has the potential to linger in the reader mind with a sense of timelessness due to its unresolved nature.

Sound was also applied to *Sad Reflections* through the use of word balloons of varying lengths. Sound effects were not applied to this project as these are used primarily by the super hero genre and were not seen by the artists as appropriate for this project. Word balloons were also removed in several sections of the work to create a sense of timelessness through the removal of sound.

When examining the use of sound in *Sad Reflections*, a technical issue that was not faced by McCloud's pre-comic examples was the introduction of text and dialogue. When analyzing the visual narrative of the first few pages, the use of borderless panels created a sense of timelessness successfully. When text was added however, issues arose as to the clarity and cohesion between words and pictures. The lack of page edges again created difficulties when placing text within the borderless panels as the text tended to 'float' on the page and lose narrative clarity. This was less of an issue when only one character was present as the



Text 'floating' within borderless panels.

*Sad Reflections*, pp. 2 – 4.

'floating' text established a feeling of internal monologue as can be seen in as first few pages of *Sad Reflections* showing a single character praying. While this was a successful translation of the spoken dialogue, it was primarily used to place large sections of text on the page without the need for sentence continuity. It was found that when small portions of text and dialogue are used with borderless panels, it is possible for the narrative to become less structured. However when using this method with large sections of text or dialogue, especially with the introduction of multiple characters, the borderless panels did not offer a means to clearly define the narrative path. This was somewhat alleviated by the introduction of bordered panels as this structure gave the dialogue a point in which to attach itself to the images via the use of speech balloons and speech tails. It also allowed the dialogue to switch between characters as closure was established between panels by the use of the gutters. The application of text boxes, speech balloons and speech tails were found to be necessary to delineate the text from the complex background imagery and to clearly define the narrative path. A loose wave rhythm was used to reflect the rhythm established by the placement of

panels; this helped to direct the reader through the story by the use of a defined reading pattern.



A wave rhythm was used to consistently guide the reader through the comic. *Sad Reflections*, pp. 28 – 30.

The final issue identified with the addition of sound to the digital Infinite canvas was the need to increase of the text size from that usually used in print comics, as the combination of file compression and screen resolution meant that the text tended to carry some artifacting and became difficult to read in the smaller font size. The general font size used through this project was set at twenty-two points.

## Line

The third traditional comic technique explored is “Line”.<sup>35</sup> The term ‘Line’ is used to discuss the sensory response provoked by the application of line to establish the underling emotional core of the work. Depending on the artistic intent the use of line in the artwork can be severe, aggressive, nervousness and dynamic, or gentle, happy, whimsical, timeless, and unstable. It can also establish the surrounding scene of cold, hot, loud, quiet, clean or unhygienic. The emotion behind a line can be influenced by the direction of the line, its shape and by its character. McCloud (1993, p. 125) states that ‘the most bland expressionless lines on earth can’t help but characterize their subject in some way’.

McCloud (1993, p. 123) states that application of emotive line work can also be utilized effectively in the background to underscore the inner emotional core of the work while

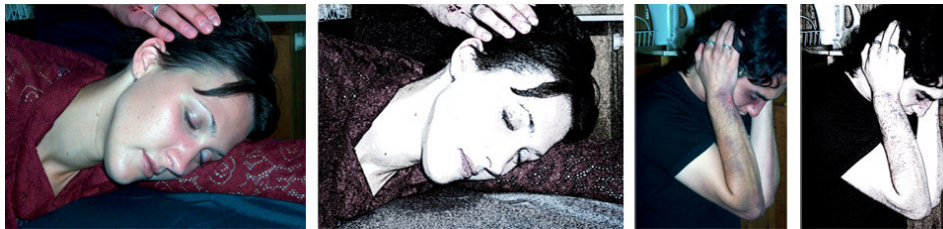
<sup>35</sup> Technique assessed by the artist in relation to the project *Sad Reflections*.



allowing little or no distortion to the characters. Innovative use of line and symbols when creating word balloons and lettering can also enhance the overall mood of the panel, for example the representation of an icy tone, a shaky voice, or a quiet moment.

Citing the works of Edvard Munch, Vincent Van Gogh and Kandinsky, McCloud (1993, p. 123) states that the use of colour can also provoke a sensory response in the viewer through the use of ‘angry reds, placid blues, anxious textures, loud shapes, quiet lines, cold greens’.

The sensory response provoked by the application of line to establish the underlying emotional core was considered carefully for *Sad Reflections*. The images used for the project were created through the manipulation of digital photographic images. The underpinning core of the *Sad Reflections* narrative explores the complexity and confusion of life. The line work therefore was designed to be less structured and more disordered than the original photo<sup>36</sup>.



Digital photos were manipulated in Photoshop to create lines that reflected the complexity and confusion of life.

Through the processes used to manipulate the photos, the images that emerged were reflective of a more pen and ink style. This use of manipulation expressed the emotions of the characters clearly while underlining the messiness and uncontrollability of human life and relationships within the line. This application of line in particular embodies the concepts documented in chapter five of *Understanding Comics* (McCloud, 1993, p. 118) titled ‘Living in line’.

The mood of the story is established in the opening few pages by following the lone character of Anna through her prayers. The first two pages in particular have deliberately softer lines,

cleaner colouring and layout, and the juxtaposition of the inner memory to the more flawed and human images in the foreground, reflecting the inner resolve and focus of the female character. Tension is supplied by the unspecified red blood drops in a primarily green background and by the contemplative full colour presence of Anna smoking in the foreground. These controlled images begin to slowly degrade once Anna begins to externalize the dialogue and are a reflection of her slipping control into more human emotions.



The juxtaposition of tension between foreground and background images through line and colour.

Red Blood drops. *Sad Reflections*, pp. 2 – 4.

This was a deliberate choice to highlight the opening sequences as more pure and angelic before integrating the idea of human fallibility and the falling from grace of the character. With the introduction of the character’s brother Mike, the lines have ceased to be neat and the colour becomes harder and more realistic. This reflects the lack of control Anna now has over the unfolding events and her brother’s response. Some balance and softness is regained by the characters in the childhood memory sequence, but ultimately this is a fragile truce before returning to the messier present and violent past.



The childhood memory sequence inserts balance and softness in the narrative before returning to the more violent present. *Sad Reflections*, pp. 10 – 14.

Mike begins his introduction into the story as a ghostly figure of softer lines and the use of transparency, but as he progresses through the story he becomes more solid reflecting the shifting power within the narrative. This is particularly illustrated during the flashback

<sup>36</sup> Photos shown are ‘Anna’ played by Amanda Sharp and ‘Mike’ played by Leigh Martin.

sequences of Mike's death whereby Mike is shown in full colour while Anna is de-saturated and grey. It illustrates Mike's ownership as an active participant in the unfolding events and to underscore the Anna's passive non-involvement. The story concludes with the Anna once again alone and emotionally drained. Visually this is represented by reflecting the borderless panels used in the beginning to recapture the sense of timelessness.

Throughout the story the background images and setting are deliberately obscured and vague, to highlight the personal emotional struggles of the main characters. These emotional struggles are visually amplified throughout the story by the use of silent physical struggles



The emotional struggle between the two characters is reflected in the background imagery. *Sad Reflections*, pp. 5 - 7.

between the characters to represent the internal foreground conflict. This emotional struggle was also reflected in the lettering chosen and the shape of the word balloons used, which was focused toward underlining the chaotic nature of the characters.

In *Reinventing Comics* McCloud (2000) suggests the use of colour to reflect the changing moods throughout the comic specifically 'Angry reds, placid blues, anxious textures, quiet lines, cold greens'. All of these suggestions were implemented into this project with success. The use of the emotive background colours tracked the changing emotional state of the characters and to maintain a sense of cohesion to the story. The cold greens are used in the beginning of the story reflect the isolation of the single character, before merging into the use of placid blues reflecting the first unsteady contact between the characters. A section of white representing the innocence of childhood separates the placid blues and angry reds, followed by resigned purples and finishing with bleak black overtones. The use of the background



3. *Duo-specific*: Both pictures and text convey essentially the same information. For example picture: smiling child, Text: I'm happy.



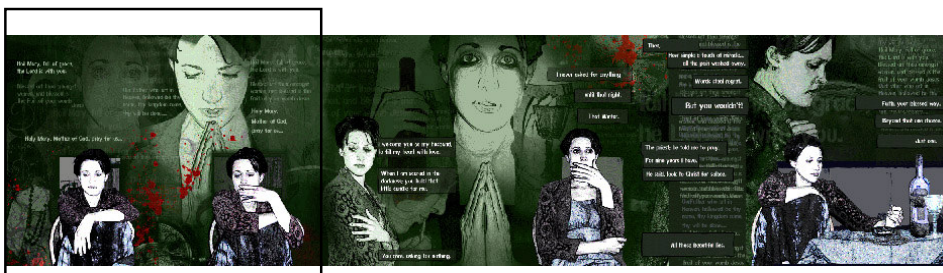
The duo-specific combination of words and pictures as applied to *Sad Reflections*, pp. 19 – 21.

4. *Additive*: The text amplifies or elaborates on the pictures or visa versa.



The additive combination of words and pictures as applied to *Sad Reflections*, pp. 17 – 19.

5. *Parallel*: Both pictures and text tell different and unrelated stories simultaneously
6. *Montage*: The equal integration of words and pictures resulting in both becoming one image. For example the text becomes imbedded in the image without word balloons.



The montage combination of words and pictures as applied to *Sad Reflections*, pp. 2 - 4.

7. *Interdependent*: Both pictures and text work jointly to tell a story that could not be effectively expressed singularly.



The interdependent combination of words and pictures as applied to *Sad Reflections*, pp. 8 – 10.

Out of the seven options presented by McCloud, six of the combining words and pictures techniques were applied in *Sad Reflections*. The technique of montage was applied with great effect during the opening for pages to differentiate the internal monologue from the spoken dialogue. The word specific method was applied from pages eleven to thirteen through the use of faded images that supported the ongoing narrative but did not significantly add to the overall dialogue being said. The reverse of this method, the picture specific combination, was applied on page eighteen allowing the images to dominate the text. The use of the duo-specific method was limited to singular panel on page twenty as this particular method, while appropriate for the horizontal Infinite canvas was not felt to be conducive to the narrative development. The use of the additive method was used to reinforce the violence inflicted on Mike and can be seen on pages seventeen and nineteen. The final method applied was the interdependent combination. Described by McCloud as the most common of the combinations it can be seen throughout this project but specifically on pages eight and nine. The application of the parallel methods was not applied in this project as, while not incompatible to the horizontal Infinite canvas, stylistically it was not thought to be conducive to the narrative development of this project. Once again it was found that the application of these traditional comic techniques, in this case the application of combining words and pictures, affected the content of the panel and not the physical design or placement of the panel itself.

## Overview:

When reflecting on McCloud's four key traditional comic techniques of gutters, time frames, line, with combining words and pictures, several issues are highlighted. While McCloud (1993) discusses all of the four traditional comic techniques in detail in *Understanding Comics*, he focused primarily on their effect on the content of the panel and not the physical placement of the panel itself. McCloud intermittently acknowledges the impact the physical panel has upon the process but offers no practical deconstruction of a completed page and the traditional comic technique complexities in situ, preferring to sample individual panels away from their original context. As the use of the traditional comic techniques affects the content of the panel only, their application to the horizontal Infinite canvas model encountered no insurmountable issues.

## 7.0 McCloud's new techniques applied to the horizontal Infinite canvas

After the release of *Reinventing Comics*, McCloud (2000) continued to publish his theories for web comics in a digital environment. Described by McCloud (2000) as 'An online continuation of my 2000 book *Reinventing Comics*, "I Can't Stop Thinking!" provided a forum for ongoing speculations about digital comics'.<sup>38</sup> It also culminated in McCloud writing six short online papers from June 2000 to June 2001, creating several new techniques for comics in a digital environment. These terms were trails, distance pacing, narrative subdivision, sustained rhythm and gradualism.<sup>39</sup> These new techniques were applied to *Sad Reflections* to assess their effectiveness when applied to the horizontal Infinite canvas and to assess their usefulness when combined with the application of the traditional comic technique of gutters, time frames, line, combining words and pictures.

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<sup>38</sup> McCloud, S 2001, 'I Can't Stop Thinking', *Online Comics*, issues 1 – 6, viewed 20 January, 2006, <http://www.scottmccloud.com/comics/icst/index.html>

<sup>39</sup> It is interesting to note that McCloud (2001) does not document any of the difficulties he faced in the creation of his vertical infinite canvas, preferring to maintain the upbeat tone of his text *Reinventing Comics*. Scott McCloud, 'I can't stop thinking #4', viewed 20 January, 2006, <http://www.scottmccloud.com/comics/icst/icst-4/icst-4.html>

## Trails

The first of McCloud's new techniques to be applied are 'Trails'.<sup>40</sup> Described by McCloud as a 'radical departure from the old left-to-right and up-to-down protocol of traditional printed comics',<sup>41</sup> trails are defined as the application of line linking consecutive panels in an Infinite canvas environment. The combination of trails and the Infinite canvas create the opportunity for panels to 'trail' freely in the digital environment without the need for the previous side by side structure of the traditional printed comic.

McCloud states that trails have the ability to treat the screen as a window rather than as a page lending them a distinct story telling advantage. When analyzing the use of trails when applied to *Sad Reflections* it was found that their application provided a diversity in the direction of the narrative path as each panel did not have to follow the next in a straight line. Seen on pages nineteen, twenty and twenty-one, the resulting artwork becomes less structured due to the added flexibility of the trails. However it was also found that closure between the panels appeared to be forced and inconsistent, the linking of the panels relied heavily on the use of trails rather than the effective application of gutters. This was particularly evident in sections where two panels were in disparate locations. The physical presence of trails was distracting, mechanically contrived and, when reading the work, difficult to follow.



Trails as applied to *Sad Reflections*, pp. 19 – 21.

<sup>40</sup> Technique assessed by the artist in relation to the project *Sad Reflections*.

<sup>41</sup> Ibid.



In *Understanding Comics*, McCloud (1993, p. 91) argues that closure is difficult when it is the ‘unifying properties of design that make us more aware of the page as a whole rather than its individual components, the panels’. While this statement was made to argue McCloud’s preferences for iconic images over more realistic artwork, it raises questions when assessing the effectiveness of a design mechanism such as the use of trails that can be visually confusing. Integral to the use of trails is its ‘unifying properties of design’ which, by McCloud’s definition, potentially negate the effectiveness of the traditional gutter and its ability to achieve closure.

When applied to *Sad Reflections* it was found that, while the use of trails mechanically succeeds when applied to the horizontal Infinite canvas, the over riding contrivance as a design solution distracted from the unification of the project work and impeded the application of closure. Closure was also lost when the images were removed at a distance from each other and only linked by a trail, causing difficulty in unifying the images and the intimacy created between the creator and reader. It was found by the artist that the application of trails in the horizontal Infinite canvas model did interfere specifically with the application of the traditional comic technique of gutters and time frames. It did not affect the inherent structure of line or combining words and pictures.

### **Distance pacing**

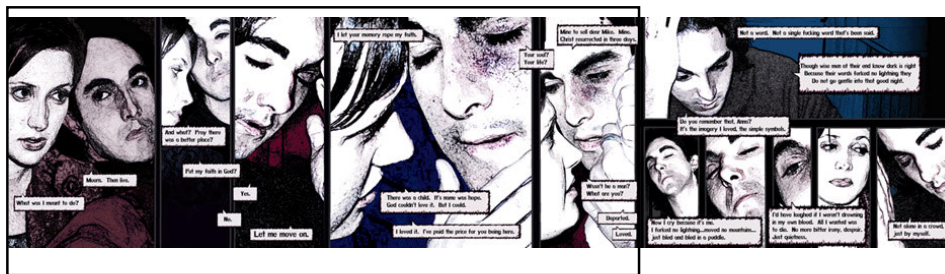
The second of McCloud’s new techniques is ‘distance pacing’.<sup>42</sup> The term distance pacing is used to define the ability to manipulate the perception of time by the readers by applying varying distances between panels to increase or reduce time. McCloud states that ‘If you follow the basic tenet of sequential art – that to move in space is to move in time – then increasing and decreasing the distance between images can strongly influence the passing of

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<sup>42</sup> Technique assessed by the artist in relation to the project *Sad Reflections*.

time within a story'.<sup>43</sup> McCloud suggests that for tight pacing images should be situated closely together and further apart for slower pacing.<sup>44</sup>

McCloud's theory of distance pacing was examined by applying both tight pacing and slow pacing to *Sad Reflections*. Tight distance pacing was used during dialogue scenes between the two characters to reflect the speed of the conversation. To achieve this, full vertical panels were placed closely side by side as seen on pages twenty-three and twenty-four. To accentuate the swiftness for the reader, several panels were deliberately thinner than others to reflect the dialogue exchanged. These panels were inter-dispersed with wider quieter panels to reflect the changes to the characters' mood. In contrast slow pacing was used to establish juxtaposition



Distance pacing as applied to *Sad Reflections*, pp. 23 - 25.

of time between the widely spaced foreground images. Applied to pages two to four, the slow distance pacing was used to establish a juxtaposition of time between the widely spaced foreground images of the female character slowly smoking a cigarette and the more dreamy timeless background images of prayer. In the foreground, the act of smoking is used by the reader to establish an understanding of time.



Distance pacing as applied to *Sad Reflections*, pp. 2 - 4.

<sup>43</sup> Scott McCloud, 'I can't stop thinking #4', viewed 20 January, 2006.

<http://www.scottmccloud.com/comics/icst/icst-4/icst-4.html>

<sup>44</sup> Ibid.

While the character is not seen to light or stub the cigarette, the reader is able to interpret the scene through an understanding of how long it takes the character to smoke a cigarette. In contrast the background images are rendered deliberately timeless and dreamlike through the use of borderless panels. This deliberate juxtaposition reflects the characters inner tension, and to underscoring the flexibility of time when coloured through emotion.

Both the application of the slower and tight distance pacing were successful when applied to the horizontal canvas. It must be pointed out though, that the application of distance pacing is not new to the traditional comic structure. In *Comics and Sequential Art*, Will Eisner (1985, p. 30) states that when time needs to be compressed a greater number of panels, or the use of narrower panels, should be applied. He goes on to say ‘by placing the panels closer together we deal with the “rate” of elapsed time in its narrowest sense’. Eisner does not follow this with a discussion on creating slower pacing through the use of distance, and in this instance McCloud’s distinction of ‘distance pacing’ and an online technique could be justified. When coupled with McCloud’s technique of trails the panels could be spaced widely apart in a sparse manner, a visual technique not often seen in the current western comic book market. McCloud states on his website, the use of well spaced panels in print would cause the reader to ‘scream bloody murder’.<sup>45</sup> The application of distance pacing in the horizontal Infinite canvas model was used without difficulty and did not interfere with the application of the traditional comic technique of gutters, time frames, line or combining words and pictures.

### **Narrative subdivision**

The third of McCloud’s new techniques is ‘narrative subdivision’.<sup>46</sup> Narrative subdivision is defined by McCloud as the freedom to divide a narrative into sections when dictated by the artist and not by the page count as seen in traditional print comics. While McCloud concedes

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<sup>45</sup> Scott McCloud, ‘I can’t stop thinking #4’, viewed 20 January, 2006, <http://www.scottmccloud.com/comics/icst/icst-4/icst-4.html>

<sup>46</sup> Technique assessed by the artist in relation to the project *Sad Reflections*.

that stories of length will still need to be divided at some stage he states that ‘but it does empower them to choose those divisions bases on the needs of each story’.<sup>47</sup>

The application of narrative subdivision can be seen in *Sad Reflections* when presented in a digital environment. The project can be viewed in two different versions. The first version of *Sad Reflections* is divided into a series of pages. The reader can move forward and backward through the project by clicking on either the arrow buttons or page numbers.



Narrative subdivision as applied to *Sad Reflections* through the use of Flash, pp. 11 - 13.

The second version of *Sad Reflections* is show as one continuous unbroken canvas from beginning to end. The reader navigates the story progression through the use of the horizontal scroll bar. Both have been created to explore the potential differences of presentation for the reader. By offering two reading experiences of the same content, *Sad Reflections* demonstrates the flexibility of the narrative subdivision technique as defined by McCloud.



Narrative subdivision as applied to *Sad Reflections* through the use of Flash, pp. 19 - 21.

The ability to create a project to size dictated by the story and not by a limited printed page count is a definite advantage of a digital environment. An argument can be made however that the use of this additional space and freedom is a given of the new environment rather than the creation of a new technique. McCloud’s historical example of cave art and Egyptian tombs both supports the concept of the Infinite canvas, but also demonstrates the instinctual

<sup>47</sup> Ibid.

use by artists of all working surfaces when available. The creation of a new term for what is perhaps a natural migration by artists may be superfluous. The application of narrative subdivision to the horizontal Infinite canvas model was used without difficulty and did not interfere with the application of the traditional comic technique of gutters, time frames, line or combining words and pictures.

### Sustained rhythm

The forth of McCloud's new techniques is 'sustained rhythm'.<sup>48</sup> Described by McCloud as 'a corollary of narrative subdivision',<sup>49</sup> he believes with the added control allowed by narrative subdivision that the use of sustained uninterrupted sequences<sup>50</sup> will help to develop the mood and atmosphere throughout the story.

The application of this technique can be seen repeatedly throughout *Sad Reflections* and was used in two distinctly different ways. The first of these, seen on pages such as eleven to thirteen, established an easy lyrical rhythm through the use of continuous borderless panels



Sustained rhythm as applied to *Sad Reflections*, pp. 11 – 13.

allowing the eye to drift seamlessly from one image to another. In contrast to this a more staccato rhythm of continuously panelled scenes, such as pages eight to ten, reflected the angry and abrupt dialogue between characters. While the overall use of the horizontal

<sup>48</sup> Technique assessed by the artist in relation to the project *Sad Reflections*.

<sup>49</sup> Ibid.

<sup>50</sup> Ibid.





## **Overview**

When reflecting on the McCloud's five new techniques of trails, distance pacing, narrative subdivision, sustained rhythm and gradualism it was found that most worked successfully in the horizontal Infinite canvas format. Of the five techniques only the application of trails interfered with the application of traditional comic techniques of gutters and time frames and their ability to find closure. This clash questions the ability of two disparate panels, connected by a line or trail, to achieve meaningful closure between the images when they are no longer required to be side by side.

In *Understanding Comics*, McCloud (1993) focused on the content created in the panel by the traditional comic techniques. When discussing the new online techniques however, McCloud focuses heavily on the practical application of the physical panel within the digital environment. While several of the new techniques are seen to be similar to the original traditional comic techniques, McCloud's focus on the practical application of the new techniques was beneficial. Overall several of McCloud's new techniques appear to have strong potential and it is hoped that with the ongoing development, these new techniques can be clearly defined as uniquely digital techniques and not as repurposed traditional comic techniques.

## **8.0 Digital content and Interface design**

When applying the horizontal Infinite canvas to a digital environment two issues arose. The first is the acquisition and management of the digital content required by the project. The second is the user interface design used to present the final product.

When discussing digital content in *Reinventing Comics* (2000), McCloud draws a distinct line between what he describes as digital comics and online comics. McCloud (2000, p. 202) states that 'Digital comics are comics that are pure information' and goes on to say that they



‘embrace the digital environment as their native soil and at best, they plant in that soil what could never grow anywhere else’. Online comics on the other hand are dismissed by McCloud (2000, p. 203) stating that while they ‘are all digital comics in a technical sense’ the transference of printed comics to the web unchanged was “repurposed” print at heart’. McCloud is particularly scathing of scanned print comics that have not been altered from the traditional vertical layout, which requires the reader to scroll down for the lower part of the page, to a more computer screen friendly horizontal layout. While comics that are not modified to fit their new digital environment are clunky to navigate, McCloud’s dismissal of any content not directly created within the computer as ‘repurposed print’ appears short-sighted and biased. When discussing his own digital content, McCloud indicates a preference for the graphics tablet, a digital drawing tool which allows information to be drawn directly into the computer, and applications such as Photoshop,<sup>54</sup> image manipulation software often used to correct photos. McCloud, while very clear on what he believes is viable content for digital comics, does not provide or discuss alternate methods of image acquisition.

One of the few alternate methods available is the use of digital photography and image manipulation. To acquire images of ‘pure information’ for *Sad Reflections*, the images were acquired by digitally photographing two actors on location using a predetermined storyboard. Photos were taken at a high resolution and downloaded directly into the computer. They were then manipulated in the Photoshop program to create images that reflected a more hand drawn effect. This method of image acquisition allowed the manipulated images to be cropped, rotated, flipped and cut out as required.<sup>55</sup>

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<sup>54</sup> It is interesting to note that McCloud also distains the use of realistic imagery, a format manipulated widely by the software Photoshop, when discussed in *Understanding Comics* (1993, p. 91) stating that ‘realistic images have a bumpier ride’ and ‘look a little more like a series of still pictures...to me anyway’. However in *Reinventing Comics* McCloud (2000, pp. 146-148) is also dismissive of the application of multiple Photoshop filters stating that ‘Seasoned professionals can often spot ‘newbies’ by their tendency to overdo it; using multiple effects filters on a single image for example’ and goes on to describe it as ‘bad art’.

<sup>55</sup> While this method of acquiring ‘pure information’ complies with McCloud’s rigid viewpoint of appropriate content for a digital environment, it is interesting to point out that McCloud (1993, p. 91) spends several pages in *Understanding Comics* dismissing the use of more realistic images in comics as ‘still pictures’ that poorly communicate the content of the artwork. When examined separately, McCloud presents the problems he identifies with both online comics and realistic images with some success. However, when both arguments are viewed

When photographing the images for *Sad Reflections* several issues arose. The photos required were shot in a small room. It was discovered quickly that any benefits the ambience of the interior lent to the images taken were outweighed by the limitations of the cramped conditions that impeded the movement of both the photographer and the actors. Rather than a physical location it was identified that a more effective method would be the use of a room with a large green screen. The green screen is used with great effect in the film industry allowing the addition of digital scenery content to be added in postproduction. The utilization of a green screen process would have facilitated better capture of raw imagery and more efficient production schedule. A green screen would also have helped the separation of the actors from the background images. This process is required for the repositioning or substitution of the actors in the space and the application of different surface textures to the backgrounds.

It was also established during the project development that it would have been advantageous if a series of standardized photos of the actors had been taken separately from the images shot for the story board. These additional photos would have allowed the artist far more freedom in the studio, adding flexibility to the image manipulation when photos taken for the storyboard were found to be inadequate. Recommended image documentation would incorporate long, medium and close up shots. Photos of actor interactions with key props, physical and facial emotions (joy, sadness, anger, disgust, bewilderment and hope), and key physical poses dictated by the narrative such as sitting, kneeling etc would be advantageous. While at first glance these recommendations might seem time consuming and unnecessary, additional photos for this project were not possible as the female actress used in the story moved overseas during the development phase. Establishing a series of standardized shots would have counteracted this issue and empowered the artist with all available options. It

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together a picture emerges of clear stylistic bias by McCloud towards his own method of image creation; heavily 'cartooned' images hand drawn directly into the computer.

would also be beneficial practice for future projects, especially those involving several actors and ongoing storylines where timing and cost could impact heavily.

The final recommendation when photographing actors would be a rehearsal of the work prior to shooting the scene. This would have helped the actors find cohesion in the work, familiarity with the environment and create successful character interaction. The utilization of a photographic trigger may have assisted in capturing the moment more accurately, removing some of the stiffness and posed quality found in the images.

### **File management:**

A clear and consistent file management was an integral part of the workflow process. With almost a thousand photos taken, all images were converted to a standardized size and resolution and saved in an appropriate file format before work commenced. These images were then allocated to separate working folder i.e. 'Anna', 'Mike' 'Anna and Mike' 'Hospital'.

Each file was saved at 20cm x 29.87cm with a resolution of 300 dots per inch (dpi).<sup>56</sup> While this resolution size is usually associated with books and high quality magazines, it was chosen to minimize any visible file degradation that accompanies the manipulation of images saved at lower resolutions and compressed file formats. File degradation also known as 'artifacting' or 'jaggies', can be identified by the stair-stepping effect on the edge of the image that creates a jagged appearance.<sup>57</sup> Although the use of a high dpi increased the file sizes and could potentially slow workflow, the higher image quality produced visibly better images and the

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<sup>56</sup> Photoshop files are made up of many pixels in a grid each containing a colour and together they create the overall image. These pixels are calculated by the computer in a grid known as dots per inch (dpi). The higher the dpi the more information is stored and the more detailed the image is. Large images can be sized down effectively by removing information. Resizing small images to larger images are more difficult as the additional information is calculated by the computer to reflect the average pixel colour available (Segal, 2002).

time added by slower computer processing was offset by time not exhausted repairing damaged images. Another benefit to working with high dpi images was that the final product could be easily resized to a web format such as a JPEG<sup>58</sup> or GIF<sup>59</sup> at 72dpi with a minimal loss of quality.

### **The working surface**

When creating the project it was found that it was impossible to treat the full horizontal Infinite canvas as simultaneous surface. The work progressed with more rhythm and structure when the canvas was sectioned into defined ‘pages’ that still incorporated the overlapping of layers to prevent any visible sectioning to the work. This was done through the use of the guides function in Photoshop which allowed vertical blue indicator lines to mark the sections without affecting the image. To continue the imagery seamlessly from ‘page’ to ‘page’ a working document of five ‘pages’ was found to be the best method as larger documents created software issues. One such software issued face was that once the files reached 30,000 pixels, Photoshop was unable to continue to save files in the Photoshop format. While other saving options were available such as TIFF<sup>60</sup> and Photoshop RAW,<sup>61</sup> this issue would still continue as the file increased in size and length. It was also determined that the potential risk of file corruption was a serious concern and that the combination of both problems required the image to be divided and saved separately in 5 ‘page’ sections. This also alleviated the

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<sup>57</sup> Ibid.

<sup>58</sup> Joint Photograph Experts Group (JPEG) An image file format most often used to store photographs in a digital format that is compressed to reduce the size of the file.

<http://glossary.ippaper.com/default.asp?req=glossary/term/1239&catitemid=>

<sup>59</sup> Graphics Interchange Format (GIF) One of the two most popular file formats for graphics on the Internet, the other being JPEG. It is popular because it reduces the file size of the image. It supports black and white, colour, and transparency. It is best suited for images containing large areas of the same colour.

<http://glossary.ippaper.com/default.asp?req=glossary/term/967&catitemid=>

<sup>60</sup> Tagged Image File Format (TIFF) A graphics file format developed by Aldus, Adobe, and Apple that is especially suited for representing large bitmaps, such as scanned black and white or colour images.

<http://glossary.ippaper.com/default.asp?req=glossary/term/2319&hlite=true&querytext=TIFF>

<sup>61</sup> A Photoshop Raw file is a Photoshop PSD file without a header. The header information must be entered when the file is imported into Photoshop. The raw format is used import and export bitmap data using a very simple, uncompressed binary format.

<http://www.faqs.org/faqs/graphics/fileformats-faq/part3/section-123.html>

ongoing need for a large scratch disk<sup>62</sup> space required by Photoshop to process the open document.

## **Interface design**

The term 'interface design' is used to describe how a product interacts with the viewer. When looking for an effective user interface design to showcase *Sad Reflections* several criteria were identified. The design interface chosen had to reflect the continuous nature of the horizontal Infinite canvas design model, while still offering a smooth reading experience. There were three primary design options outlined by McCloud (2000) in *Reinventing Comics*.<sup>63</sup> These were;

1. The use of one page per screen with the need for each page to be loaded separately,
2. The HTML designed use of the continuous scroll bars used both vertically and horizontally,
3. The use of Flash<sup>64</sup> to simulate movement from one page to the next via several different techniques.

The first option of one page per screen was dismissed immediately as it was seen as inappropriate for the project as the delivery method of separate pages negated the continuous nature of the Infinite canvas design.

The second option, a single HTML page designed to use continuous scroll bars, was chosen as it reflected the horizontal Infinite canvas model with its use of the single page structure.

The third option, with its use of Flash to simulate movement from one page to the next, was also chosen as it also reflected the horizontal Infinite canvas model with the additional advantage of added control by the reader of their environment.

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<sup>62</sup> Space dedicated on a hard drive for temporary storage of data. Scratch disks are commonly used in graphic design programs, such as Adobe Photoshop. Scratch disk space is only for temporary storage and cannot be used for permanently backing up files. [http://www.webopedia.com/TERM/S/scratch\\_disk.html](http://www.webopedia.com/TERM/S/scratch_disk.html)

<sup>63</sup> McCloud, S 2000, *Reinventing Comics*, New York, pp. 230-233.

<sup>64</sup>Flash is a dedicated design program often used in the creation of websites.

It was decided that both the HTML and Flash methods<sup>65</sup> would be used to compare the strengths and weaknesses of both systems.<sup>66</sup>

In *Reinventing Comics*, McCloud (2000) identified two primary webpage software packages; Macromedia Flash and Sun Java. Since the publication of *Reinventing Comics* (McCloud, 2000), both of these programs have inspired the recent development of plug in applications specifically for comics such as the Tarquin Engine (Goodbrey, 2005), a Flash plug that uses animated panel transitions and other such features. Created by comic creator Daniel Merlin Goodbrey, the Tarquin Engine has only recently become available to the home user. In 2004, the Infinite Canvas (or IC) was developed to work with Flash and Java by the creator Markus Müller (2006). Both engines are finding a user following by web comic creators. While the Tarquin engine requires ‘a reasonable level of familiarity with the basics of Flash’ (Goodbrey, 2005) the Infinite canvas models is reportedly more accessible to inexperienced users however it has only been developed currently for the Macintosh platform (OS 10.2 or later). While both plug-in the Tarquin Engine and the Infinite canvas engine offer many opportunities for McCloud’s several Infinite canvas models they were not required for this project. Created in Flash 7, the *Sad Reflections*<sup>67</sup> interface design focused on the need to preserve the horizontal Infinite canvas model while creating a user interface that was clear and easily navigated by the reader.

The first interface design option chosen, the single HTML page designed to use a continuous scroll bar, was found to encapsulate *Sad Reflections* and the horizontal Infinite canvas

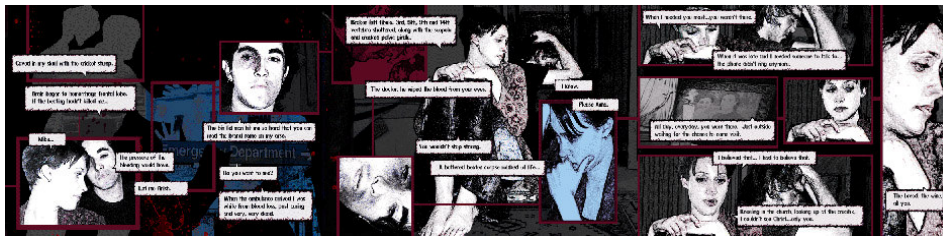
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<sup>65</sup> The minimum operating system requirements to access both the HTML and Flash versions of *Sad Reflections* is Windows XP and Mac OSX 10.2. The minimum Web browser requirements are Firefox 1.5, Safari, and Internet explorer. It is recommended that the Active X controls are enabled in Internet Explorer as the Flash version requires the Flash player plugin to view.

<sup>66</sup> McCloud utilises a combination of the HTML continuous scroll and Flash design on his website.

<sup>67</sup> Both the HTML and Flash programming for *Sad Reflections* was created by Adam Klys.

clearly.<sup>68</sup> The seamless nature of the comic is accentuated and the unbroken nature of the continuous horizontal scroll pulls the reader towards the end. Visually appealing, the HTML



HTML delivery method as applied to *Sad Reflections*, pp. 19 - 21.

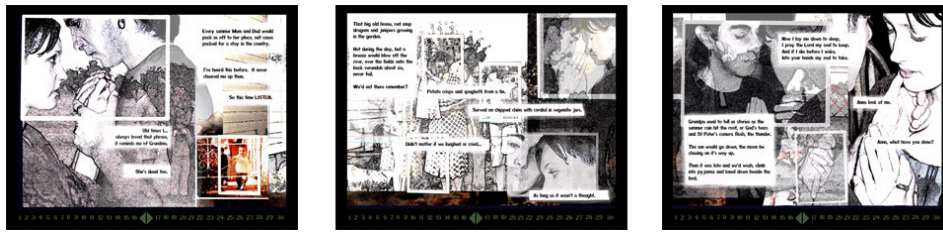
option does have several issues. The first issue is the constant scrolling by the reader to continue the story, an action which becomes tedious quickly, and the lack of accurate user control over the readers' movement through the story. A primary example of this is the inability by the reader to return to a specific section without the need to scroll through the entire story. The second and primary issue with the HTML scrolling method of delivery is the constant jerking of the images as the arrows slowly pull the work across the screen. A similar result is achieved through the use of the slide bar with the added potential of moving forward too quickly, and moving beyond the required area. This jerking pulls the reader from the comic content by distracting the focus towards the mechanics of the comic's delivery, providing a poor overall reading experience.

The second option explored was the use of Flash as a delivery platform.<sup>69</sup> In response to the scrolling issues found in the HTML distribution method, the second version of the project is delivered as a page to page method within a single web page. Primary navigation of project is through the use of directional arrows; however page numbers are also available to offer direct access to any single page in the story. Benefits of this delivery method are two fold. The first, as this navigation is achieved within the one web page, further download times after the initial request are not required. The second strength of this interface design is the level of viewer

<sup>68</sup> Technique assessed by the artist in relation to the project *Sad Reflections*.

<sup>69</sup> Ibid.

control given to the speed of the story and forward and backward navigation. Through the use of directional arrows the horizontal format preserves the establishment of a scrolling



Flash delivery method as applied to *Sad Reflections*, pp. 11 - 13.



Detail of Flash menu bar.

effect from one page to the next without the distractions of image jerkiness found in the HTML model. One negative aspect of the Flash interface design is the partial loss of the seamless quality the horizontal Infinite canvas model can produce within one continuous page. While each page is clearly linked to the one before and after it, the connection is not as clearly defined as the HTML scrolling method. It was found however, that the Flash model compensated for this minimal loss through the smoother and more accurate navigational tools available.

## Overview

When reflecting on the use of ‘pure information’ as stipulated by McCloud for digital comics, it was found that the use of manipulated photos is visually successful through its ability to incorporate the traditional comic technique of line to produce an emotional response in the reader. The acquisition and manipulation of the images did have some logistical issues such as selecting a workable location and the lack of additional images available outside those take for the storyboard; however these issues can be navigated around through the refinement of processes by the artist. Successful management over the volume of digital content files was very important to help maintain a level of consistency across all images. Issues arose with



size limitations in software impacting on the viable length of working surface; however it was found that the working surface was better managed if the file was sectioned into temporary 'pages' before rejoining the final product.

When assessing the application of the horizontal Infinite canvas to the interface designs of both the HTML and Flash models, it was found that both encountered different obstacles. The HTML model was the least user friendly, offering limited reader control and a jerky reading experience. It was however the most visually affective method of presenting the horizontal Infinite canvas. The Flash model, while less effective in presenting the horizontal Infinite canvas as one entity, offered a far better overall reading experience, offering the reader better control and smoother transitions between images.

## **8.0 Conclusion:**

The focus of this project was to examine the strengths and weaknesses of McCloud's Infinite canvas theory, as applied to the practical comic outcome of the *Sad Reflections*. Three key questions are used to guide this research. These questions are:

1. Does the application of traditional comic techniques affect the effectiveness of the Infinite canvas when implemented to a horizontal format?
2. Are the new Infinite canvas techniques as outlined by McCloud able to be applied to a horizontal format and what impact do these techniques have on the process?
3. Is the application of a horizontal Infinite canvas of benefit to future developers of web comics?

When focusing on the first research question, several issues arose when traditional comic techniques of gutters, time frames, line and combining of words and pictures were applied to the horizontal Infinite canvas.

It was found that due to the infinite design of the horizontal canvas difficulty was encountered when assembling panels along the canvas. In a traditional print comic the page 'edge' was used to redirect the reader back through the story. The removal of this page edge created a loss of narrative direction and clarity. It was found that a series of self imposed visual 'full stops' were needed to be used to correct this issue. This was primarily achieved through the use of full vertical panels and became essential to the overall design process. This process continued to be of assistance with the addition of sound through speech when applying time frames. Once again the lack of a page 'edge' creating difficulty when adding text to the page as it was found that without incorporating the 'full stop' panels, text became untethered within the space it was difficult to identify which part of the text was to be read next. This was not always an issue when approached as a stylistic choice through the use of borderless panels and a singular character; however the addition of multiple characters soon created confusion which was not successfully resolved by the use of speech balloons and tails. The use of bordered panels served to give the text structure, anchoring speech balloons and tails to specific characters, developing cohesion to the juxtaposition of words and illustration. The combination of bordered panels and speech balloons was also required in replicating the pace required for dialogue through the combined use of varying panel widths and heights. The application of text boxes, speech balloons and speech tails were found to be necessary to delineate the text from the complex background imagery and to clearly define the narrative path. It was also found that the size of font used in the work was larger than would be traditional employed in a print comic; a combination of file compression and screen resolution making smaller font size difficult to read.

Other traditional comic techniques applied successfully were the use of line to invoke an emotional response in the reader, as well as the combining of words and pictures. It was found that much of McCloud's discussion of the traditional comic techniques revolved around contents of the panel rather than the physical use of the panels themselves. This focus on the

panel content rather than panel construction allowed all of the traditional comic techniques to be applied effectively to the horizontal Infinite canvas.

Overall, while some difficulties were encountered through the application of traditional comic techniques to the horizontal Infinite canvas, all were overcome through experimentation. The application of these techniques enriched the online process giving it structure and rhythm.

The second of the research questions posed focuses on the McCloud's new Infinite canvas techniques devised for the creation of the vertical Infinite canvas and the success of re-applying the same techniques of trails, distance pacing, narrative subdivision, sustained rhythm and gradualism to the horizontal format.

When applying the first of the new techniques of trails it was found that, while there was no impediment to the overall structure of the horizontal Infinite canvas, the application of trails did clash with the inherent nature of the traditional comic techniques of gutters and time frames. Mechanically, the use of trails succeeds in connecting images. It allows the artist the freedom to move otherwise sequential images to disparate locations while still maintaining the link between the two images through the use of the trail. However, this displacement of images away from the traditional comic structure of side by side sequential images serves to impede the reader's ability to find meaningful closure between these images. In *Understanding Comics* McCloud (1993, p. 91) had stated that closure is difficult when it is the 'unifying properties of design that make us more aware of the page as a whole rather than its individual components, the panels'. It was found that the layout flexibility achieved by the use of trails did not outweigh its contrived appearance or the negative results on the application of closure.

McCloud's other new Infinite canvas techniques of distance pacing, gradualism, narrative subdivision and sustained rhythm were all successfully applied to the horizontal Infinite canvas. The successful application of distance pacing and gradualism was felt, for a large

part, due to their very similar structure to the traditional techniques of time frames. The successful use of narrative subdivision and sustained rhythm were found to be a natural by-product of the horizontal Infinite canvas and were applied instinctively by the artist.

Finally, when examining the third research question and the benefit of the horizontal Infinite canvas for future developers of web comics, it was found that there was no insurmountable issue when creating content for this Infinite canvas model. When looking at the digital aspects of the project, the use of manipulated photographs as pure content was successful. However, it was found that the process could be improved by the use of more comprehensive documentation, access to a green screen and the use of actors and rehearsals to counterbalance any proclivity towards stilted, posed imagery. When looking at the interface design the use of Flash as a delivery method was more successful than the HTML model as it provided a smoother and more immersive reading experience.

In conclusion it is believed that the horizontal Infinite canvas model was achievable, allowing the successful application of the traditional comic techniques outlined by McCloud (1993) in *Understanding Comics*. It also allowed for the potential application of newer techniques such as those used for the vertical Infinite canvas.

## **9.0 Future research**

When reviewing the findings of the project it was identified that further research was required into more detailed integration of the interface design and the digital comic medium.

Exploration into less distracting and perfunctorily delivery methods is required to effectively present the content to the reader in a more intuitive and immersive experience.

While McCloud's Infinite canvas theory centers on its application in a Web environment, the potential of the Infinite canvas in digital media outside of the Web should also be explored.

Other platforms such as mobile devices offer potentially new application opportunities of McCloud's Infinite canvas theory investigating the implication of scale and digital presentation outside the current Web focus.

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